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TOKOLOGY.

A BOOK FOR EVERY WOMAN.

—BY—

ALICE B. STOCKHAM, M. D.

ILLUSTRATED.

Maternal love! Thou word that sums all bliss;
Gives and receives all bliss, fullest when most
Thou givest!

—*Pollock.*

REVISED EDITION.

CHICAGO
SANITARY PUBLISHING CO.
1887

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TOKOLOGY IS DEDICATED

First:

To my Daughter,
whose faith in the physical
redemption of woman by correct
living has been a constant
inspiration in its
production!

Second:

To all Women
who, following the lessons
herein taught, will be saved the
sufferings peculiar to
their sex.

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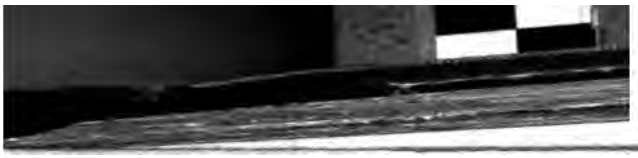

The bearing and the training of a
child
Is woman's wisdom.

—TENNYSON.

A mother is a mother still,
The holiest thing alive.

—COLERIDGE

"To be well born is the right of every child."

TOKOLOGY.

CHAPTER I.

PAINLESS CHILDBIRTH.

'I know of no country, no tribe, no class, where childbirth is attended with so much pain and trouble as in this country." Thus replied a traveler who had been many years in foreign lands, upon being interrogated as to the comparative sufferings of savage and civilized women. His occupation and sympathies had brought him into close relationship with all classes of people, and therefore fitted him for an intelligent and discriminating judgment in this matter.

Neither in India, Hindostan, China, Japan, the South Sea Islands, South America, nor indeed in any country do women suffer in both pregnancy and parturition as they do in this. Possibly among the higher classes in Europe there may be equal suffering; but the peasantry everywhere is comparatively exempt.

The usual testimony of missionaries and travelers is that the squaws of our own Indian tribes experience almost no suffering in childbirth, and the function scarcely interferes with the habits, pleasures or duties of life. I have myself seen a squaw of the Ottawa tribe carrying her pappoose upon her back,

strapped to a board, when it was only twenty-four hours old.

Mrs. Armstrong, one of the early missionaries in the Sandwich Islands, says: "With native women the labor was not long nor severe; the mother, instead of remaining in bed, arose, bathed in cold water, walked and ate as usual."

Dr. Storer says: "There is probably no suffering ever experienced which will compare, in proportion to its extent in time, with the throes of parturition." Dr. Meigs says: "Men can not suffer the same pain as women. What do you call the pains of parturition? There is no name for them but *agony!*"

It is too true that women *go down to death* in giving birth to children. Thousands of women believe that this pain is natural and that for it there can be no alleviation. "In sorrow shalt thou bring forth children" is thought to be a *curse* that applies to all women of all time.

Even the poet tells us:

> "'Tis the common lot;
> In this shape or that, has fate entailed
> The mother's throes, on all of woman born,
> Not more the children, than sure heirs of pain."

If this pain and travail is a natural accompaniment of physiological functions—if it is a *curse* upon women, then why are the rich, the enlightened and more favored daughters of earth greater sufferers than the peasantry, the savage, the barbarian, and those whom we call heathen?

American women in education and enlightenmen in freedom and progress, are the peers of the best an noblest of their sex. From individual, social and

tional interests, they ought to be conversant with all that pertains to this subject, so closely allied to the interests of the race.

We find in women of superior education and marked intelligence an exaggerated development of the emotional nature, and a corresponding deterioration of physical powers. Weakness, debility, and suffering is the common lot of most of them. Not one in a hundred has health and strength to pursue any chosen study, or to follow any lucrative occupation, and what is vastly worse, most are unfitted for the duties and perils of maternity.

Dr. Gaillard Thomas says: "Neither appreciation of nor desire for, physical excellence sufficiently exists among refined women of our day. Our young women are too willing to be delicate, fragile and incapable of endurance. They dread above all things the glow and hue of health, the rotundity and beauty of muscularity, the comely shapes which the great masters gave to the Venus de Medici and Venus de Milo. All these attributes are viewed as coarse and unladylike, and she is regarded as most to be envied whose complexion wears the livery of disease, whose muscular development is beyond the suspicion of *embonpoint*, and whose waist can almost be spanned by her own hands.

"As a result, how often do we see our matrons dreading the process of child-bearing, as if it were an abnormal and destructive one; fatigued and exhausted by a short walk, or ordinary household cares; choosing houses with special reference to freedom from one extra flight of stairs, and commonly debarred the one great maternal privilege of nourishing their own

offspring. These are they who furnish employment for the gynecologist, and who fill our homes with invalids and sufferers."

Understanding and following physiological laws, pregnancy *ought* to be as free from pathological symptoms, and parturition as void of suffering with American women as with any on earth, or even with the lower animals.

Dr. Dewees says: "*Pain in childbirth is a morbid symptom;* it is a perversion of nature caused by modes of living not consistent with the most healthy condition of the system, and a regimen which would insure a completely healthy condition might be counted on with certainty to do away with such pain."

The great English scientist, Professor Huxley, says, "We are, indeed, fully prepared to believe that the bearing of children may and *ought* to become as free from danger and long debility to the civilized woman as it is to the savage."

The following paragraphs from one of the essays in Dr. Montgomery's classical work on Pregnancy, give practical details of cases in illustration of the belief in painless parturition.

"In a letter to me Dr. Douglas states that he was called about six A. M.. Sept. 26, 1828, to attend a Mrs. D., residing on Eccles St.

"On his arrival he found the house in the utmost confusion, and was told that the child had been born before the messenger was dispatched for the doctor. From the lady herself he learned that, about half an hour previously she had been awakened from a natural sleep by the alarm of a daughter about five years old, who slept with her.

"This alarm was occasioned by the little girl feeling the movements, and hearing the cries of an infant in bed. To the mother's great surprise she had brought forth her child without any consciousness of the fact.

"A lady of great respectability, the wife of a peer of the realm, was actually delivered once in her sleep; she immediately awakened her husband, being alarmed at finding one more in bed than there was before.

"I have elsewhere mentioned the case of a patient of mine who bore eight children without ever having labor pains. Her deliveries were so sudden and void of sensible effect that in more than one instance they took place under most awkward circumstances, but without any suffering."

Dr. J. King, in his work on Obstetrics, speaks of attending cases where there was no sensation of pain. He found that by placing the hand upon the abdomen, the muscular contractions were distinctly felt, and examination proved the progress of labor, while, excepting a suppressed breath, the patient experienced no change from the ordinary condition.

Some very marked cases have come to my own knowledge proving the possibility of painless labor. I attended a neighbor of mine in four different confinements. I never was able to reach her before the birth of the child, although I lived only across the street, and according to her injunctions, always kept my shoes "laced up." She sent for me, too, at the first indication of labor. There was always one prolonged effort and the child was expelled. The heads of her children were temporarily distorted, showing pliability of the osseous structure.

Another lady patron had two children without a *particle of pain.* With the first she was alone with her nurse. During the evening she remarked that she felt weary and believed that she would lie down. She had been on the bed no more than twenty minutes when she called to her nurse saying, "How strangely I feel! I wish you would see what is the matter." When to their astonishment the child was born.

Two years later I was summoned to the same lady about ten at night. The membranes were ruptured, but no other visible indication of labor. Investigation revealed dilatation of the cervix and although she soon fell into a quiet slumber, I noticed regular and distinct contractions. The child was born about two in the morning *without any sensation of pain.* I have no doubt that in her previous confinement the contractions went on the same, and if she had been one to mark her symptoms closely, she would have felt them as one feels muscular contractions in the performance of other natural functions.

The cases that have been cited, so far as is known, were persons in excellent health, and some were persons of exceptionally fine and strong constitutions. Dr. Holbrook in his "Parturition without Pain," says: "Those women of savage nations who bear children without pain live much in the open air, take much exercise, and are physically active and healthy to a degree greatly beyond their more civilized sisters. These instances tend directly to prove that parturition is likely to be painless in proportion as the mother is physically perfect and in a sound condition of health. They certainly tend even more

strongly to prove that pain is not an absolute necessity attendant on parturition.

"The course of modern scientific investigation, moreover, has gone far to justify a belief that this terrific burden upon humanity can be almost entirely removed, and that the pain can be as completely done away with as the danger and disfigurement from small-pox. At the same time, this immeasurable benefit to humanity cannot be obtained without *proper use of means*, and the continuance of such use for a considerable period.

"The doctrines of the ablest thinkers on the subject will be found to agree in this: That it is the previous life of the mother—*the whole of it*, from her birth to the birth of the child—which almost entirely determines what her danger, her difficulty, and her pain during childbirth shall be. Her easy or difficult labor, in fact, is almost entirely her own work. Her conduct during gestation, it is true, is more immediately influential in the result than remoter periods, and bears more greatly upon the future life of her offspring than even upon herself."

Dr. Oliver Wendell Holmes once said that he believed that any disease, no matter how virulent, how malignant or how deep-seated, whether it was cancer, consumption or cholera, any disease could be *cured* if the physician was called in time. But in his wonted humor he added, "There are cases in which the physician should be called at least two hundred years in advance."

With Dr. Holmes, I believe it will take years to eradicate diseased conditions that are the heritage of this generation, and thus to produce men and women

of physical perfection. Science has proven however, that any woman possessing sufficient vitality to make procreation possible, can do much, even during pregnancy, to alleviate the sufferings of that period, as well as the final throes of travail. Pain and suffering have so long been the customary attendant upon the maternal functions, that many are slow to believe they can ever be alleviated. Painless childbirth is thought to be an impossibility. The reader is begged to lay aside all previous prejudices, and it is believed that when this volume has been thoroughly studied, he will be convinced that women in bearing offspring should furnish no exception to the laws of nature, and that pregnancy and parturition may and *ought* to be devoid of suffering.

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*In Tokology technical terms have been avoided as much as possible. For the few used the reader will find helpful hints in the Glossary, page 354. If possible, the few remedies prescribed in Tokology should be procured at a Homœopathic Pharmacy or of a Homœopathic Physician. They are, however, sometimes found already prepared in a drugstore.

CHAPTER II.

CONCEPTION—FETAL DEVELOPMENT.

THE REPRODUCTIVE APPARATUS of woman consists essentially of ovaries, oviducts, uterus, vagina and mammary glands.

THE OVARIES (Plates II and VI) are two almond-shaped bodies, situated about two and one-half inches distant on either side of the uterus. They are inclosed in the broad ligaments and suspended by a thread-like cord from the womb, also attached to the outer extremities of the oviducts. They consist of a stroma in which vesicles are embedded. It is within these vesicles that the *ova*, or eggs, are found. Every four weeks, during the child-bearing period an ovum matures, and bursting through the vesicle, as well as the surrounding membrane of the ovary, is conveyed to the womb by the oviduct.

While not the largest, the ovary is the most important of the generative organs of woman. Upon these apparently insignificant structures depends the creative power giving the grand office of motherhood, a power akin to the divine. Maternity! the holiest shrine of human life, to which poets do homage, and true men bow in reverence!

The ovaries contain the fructifying principle, and also bestow on woman the characteristics of sex. These mysterious bodies are the grand source of fem-

inine attractions. Remove all other generative organs and you do not change her in this regard—remove the ovaries, and she becomes masculine not only in character but appearance. Her figure changes, her voice becomes coarse and of lower pitch, her throat enlarges, and, in some instances, whiskers appear. Any diseased condition, too, of the ovaries produces great constitutional as well as emotional disturbances.

THE OVIDUCTS OR FALLOPIAN TUBES (Plates II and VI) are minute cylindrical openings from the superior and lateral portion of the uterus, about three inches in length and terminating in fimbriated or finger-like extremities. The latter are minute muscular bodies, which grasp the ovum as it bursts through the membranes of the ovary, and convey it into the oviduct on its way to the uterus. The ovum is less than 1--120 of an inch in diameter, and the cavity of the oviduct is so small that it would scarcely allow the entrance of a hog's bristle.

THE UTERUS (Plates II, III, IV, V and VII) is a pear-shaped muscular organ situated in the inferior portion of the pelvis, between the bladder and rectum. It is less than three inches in length and two inches in width, and one in thickness. It is pear-shaped, the *cervix* pointing to the coccyx.

The *canal* or opening into the *uterus* through the cervix is small, capable of admitting a probe ⅛ to ¼ of an inch in diameter. The walls are muscular, and in the unimpregnated state about half an inch in thickness. The cavity of the uterus is small and conical, having three openings, two at its upper portion into the oviducts, and one into the vagina. The latter is called the *Os uteri* or mouth of the womb. The

upper broad portion is called the *fundus*. It weighs from one to two ounces. It is difficult to realize how very diminutive this organ is in the virgin state, especially when we consider its power of distension during pregnancy.

The external portion of the uterus is covered by the *peritoneum*, a serous membrane which is continuous with the lining of the abdomen and covering of all the viscera. The uterus is held in place by ligaments formed of folds of the peritoneum. The broad ligament enveloping the oviduct and ovaries extends to either side, and is firmly attached to the sides of the pelvis. The round ligaments, formed from obliterated bloodvessels of fetal life and peritoneal covering, pass from the upper portion of the womb to the outside of the pelvic-bone and terminate in muscular and cellular tissue beneath the integument. There are also folds of peritoneum between the womb and bladder in the front, and the womb and rectum in the back that assist in holding it in position. It is besides largely supported by the elasticity of the vagina and muscles of the perineum. So well sustained is the uterus that only serious violations of physical laws can cause deviations of position.

THE VAGINA (Plates II and III) is simply the external outlet or passage from the uterus. It is longer in back than in front, being from three to four inches in front and from five to six inches in the posterior portion. It is a cylindrical tube of firm elastic tissue, capable of great distension. The neck of the *uterus* dips into the upper part of the vagina about three-fourths of an inch. The communication between these organs is the *cervical canal*, which in health is

found closed, admitting a probe with difficulty. The *uterus* and *vagina* are not one and the same as many suppose, yet communicate with each other. The vagina serves as a passage for the menstrual fluid, for the fetus at birth and for the reception of the male organ in copulation, and in a state of health assists the perineal muscles in sustaining the uterus.

THE MAMMARY GLANDS or breasts (Plate XI) are accessory to the generative system. They secrete milk which supplies the child with nourishment after birth. They are rounded and prominent, keeping their form and position if the surrounding muscles and tissues have not been weakened by pressure of clothing.

CONCEPTION OR IMPREGNATION takes place by the union of the male sperm and female germ. Whether this is accomplished in the *ovaries*, the *oviducts* or the *uterus*, is still a question of discussion and investigation by physiologists.

The *ovum*, or egg, matures and is taken up by the fimbriated extremities of the oviducts at the time of menstruation. To reach the outer world it must pass the length of the oviducts, the cavity and canal of the uterus and vagina. The fructifying principle of the semen consists of zoosperms, which under strong magnifying powers are seen to be filaments endowed with power of propulsion.

Once entering the uterine cavity there is no reason why they should not be able to pass into the oviducts or even to reach the ovaries. The probabilities are impregnation can take place at any point in the generative tract, providing the ovum and sperms come in contact while they still live. It is pretty well

proven that the ovum after maturing and dislodgement from the ovaries may retain its life from six to eight days, and also be that length of time in making its exit from the uterus. That the sperms are viable, also, for some days, if retained in their own element at a certain temperature, has been established quite definitely.

With many women the ovum passes off within twenty-four or forty-eight hours after menstruation begins. Some, by careful observation, are able to know with certainty when this takes place. It is often accompanied with *malaise*, nervousness, headache, or actual uterine pain. A minute substance like the white of an egg, with a fleck of blood in it, can frequently be seen upon the clothing. Ladies who have noticed this phenomenon testify to its recurring very regularly upon the same day after menstruation. Some delicate women have observed it as late as the fourteenth day.

NOURISHMENT AND DEVELOPMENT OF THE EMBRYO.—There are three distinct periods of nutrition in the uterine development of the human being:

First—Yolk nutrition.

Second—Tuft nutrition.

Third—Placental nutrition.

The period of yolk nutrition in the human is brief and probably variable. The minute size of the egg renders it impossible for it to furnish nutriment for any length of time, as is the case with the embryo of the fowl. From five to eight days after conception takes place, a membrane is formed around the ovum, called the chorion. Outside of this is still another membrane attaching itself to the womb. The inter-

nal surface of the chorion is supplied with villi or tufts resembling mulberry seed. Through these the embryo receives its nutrition, until at the close of the second month, from these tufts the *placenta*, or after-birth, begins to be developed. This is attached to some portion of the uterus, usually the upper lateral portion.

THE PLACENTA is a spongy, vascular organ, at full term eight to ten inches in diameter, and two or three inches thick at center, thinning at the edges, weighing from three-fourths to one and one-fourth pounds. In appearance it is not unlike a piece of liver, only less solid.

It is the proper vascular apparatus serving the combined purpose of fetal nutrition, respiration and excretion. At least, through its circulation all these functions are accomplished.

This, with the membranes surrounding the fetus and umbilical cord, is called the *after-birth.*

The placenta (Plates VIII and IX) lies in complete juxtaposition with the uterus with an almost imperceptible membrane interposed. The fibers and blood-vessels of the uterus and placenta do not interlace, as some suppose; each has a distinct set of bloodvessels and capillaries, and a separate circulation. Nutrition and excretion are carried on by *exosmosis*, or transudation through this very attenuated membrane.

THE FETAL CIRCULATION (Plate X), is a very interesting phenomenon. Instead of the blood going to the lungs for oxygenation, the entire circuit is performed without this, the placenta serving the office of lungs as well as of the digestive organs.

From the placenta oxidized blood is brought

through the umbilical vein, a large portion of it passing to the liver, but all eventually enters the heart by the ascending vena cava. By the Eustachian valve it is directed through the foramen ovale to the left auricle, from this to the left ventricle, which conveys it to the aorta.

Part of the blood, instead of taking this course, enters the right ventricle, and in place of going to the lungs through pulmonary arteries, passes at once to the aorta, through what is called the ductus arteriosus. After traveling the entire circuit, it is taken back to the placenta by two umbilical arteries, which are given off from the iliac arteries.

At birth the *ductus arteriosus* closes; the umbilical veins form the round ligament of the liver, and the umbilical arteries the round ligament of the uterus in the female, and the urachus, a ligament of the bladder, in the male.

The *foramen ovale* also closes, establishing a complete septum between the auricles of the heart.

A blue baby or *cyanosis neonatorum* is the result should it fail to close. The venous blood commingles with the arterial blood, and death is the result sooner or later.

THE UMBILICAL CORD is made up of two arteries and one vein. It is from two to four feet in length, attached at one extremity to the placenta, and at the other to the navel of the child. This is the medium of the circulation between the placenta and the fetus.

The *membranes* all unite before birth to form one thick, tenacious covering for the child, and also for the cord and the fetal surface of the placenta.

This incloses the fluid—the *liquor amnii*—which

serves to protect the fetus from blows or sudden jars. The membranes and the contained fluid form what is known as the "bag of waters." Not rupturing before birth, they make what is called a *veil* or *caul* over the child's face, to which is attached various superstitions, such as the gift of "second sight," clairvoyance, etc.

HEALTHY NUTRITION of the *fetus* depends entirely upon the mother. The placenta not only represents the digestive organs, but the lungs of the *fetus*. Consequently upon the condition of the mother depends the condition of the child. It has no other means of getting nutriment, or of disposing of waste material. After birth it has the same advantage as the adult of correcting errors in diet and nutrition by elimination. The skin, with its miles of perspiratory ducts, then conveys effete matter from the system, the lungs keep up by respiration a constant interchange of oxygen for carbon, while the liver, kidneys and bowels are active in their functions of depurition. *In utero* these functions are all dormant, consequently giving the fetus a disadvantage for healthy growth. Mothers often show a great solicitude about diet and conditions during lactation, while they are comparatively indifferent to these matters during pregnancy.

Especially should they breathe deeply, and that too, of pure air. Trall says, "If the mother does not breathe sufficiently the child must suffer. Many a mother gives birth to a frail, scrofulous child, for no reason except that during the period of gestation she is too sedentary and plethoric. I have known women of vigorous constitutions, who had given birth to several healthy children, become the mothers of

children so puny and scrofulous that it was impossible for them to be raised to adult age. The reason is that the mother is obstructed in her respiratory system, and although she may breathe enough to sustain her own organization in a fair condition, she does not inhale oxygen enough to supply the needs of an intra-uterine being. Many 'still births' are explainable on this principle."

THE DURATION OF PREGNANCY is nine calendar months or ten lunar months, about 280 days. If the date of impregnation is not known the *count* should be made from the beginning of the last menstruation, and add eight days on account of the possibility of its occurring within that period. It is possible in some diseased conditions for the period to extend much beyond this time. I knew one case of amniotic dropsy where pregnancy extended forty-four weeks.

Helen Idleson, M. D., in the *Med. Wochenschrift*, sums up the results of her investigations as follows; "1. The duration of pregnancy amounts to 278 days, or nearly 40 weeks. 2. The sex of the infant influences the duration, this being longer in female infants. (?) 3. The heavier the child the longer is the duration. (?) 4. The duration is longer in multipara than in primipara. 5. The younger the woman the longer is the duration. 6. The duration is longer in married than in unmarried women. 7. The first movements of the child are felt, on an average, on the one hundred and thirty fifth day, but later in primipara than in multipara.

"The *growth of the embryo* after fecundation is very rapid. On the *tenth* day it has the appearance of a semi-transparent, grayish flake. On the *twelfth* day

it is nearly the size of a pea, filled with fluid, in the middle of which is an opaque spot, presenting the first appearance of an embryo, which may be clearly seen as an oblong or curved body, and is plainly visible to the naked eye on the *fourteenth* day. The *twenty-first* day the embryo resembles an ant or a lettuce-seed; its length is from four to five lines and its weight from three to four grains. Many of its parts now begin to show themselves, especially the cartilaginous beginnings of the spinal-column, the heart, etc.

"The *thirtieth* day the embryo is as large as a horse-fly, and resembles a worm bent together. There are as yet no limbs, and the head is larger than the rest of the body. When stretched out it is nearly half an inch long. Toward the *fifth* week the head increases greatly in proportion to the remainder of the body, and the rudimentary eyes are indicated by two black spots turned toward the sides, and the heart exhibits its external form, bearing a close resemblance to that in the adult.

"In the *seventh* week bone begins to form in the lower jaw and clavicle. Narrow streaks on each side of the vertebral column show the beginning of the ribs. The heart is perfecting its form, the brain enlarging and the eyes and ears growing more perfect, and the limbs sprouting from the body. The lungs are mere sacs, about one line in length and the trachea is a delicate thread, but the liver is very large. In the seventh week are formed the renal capsules and kidneys.

"At *two months* the forearm and hand can be distinguished, but not the arm; the hand is larger than the forearm, but it is not supplied with fingers. The dis-

tinction of sex is yet difficult. The eyes are prominent. The nose forms an obtuse eminence. The nostrils are rounded and separated. The mouth is gaping and the epidermis can be distinguished from the true skin. The embryo is from one and a half to two inches long and weighs from three to five drachms, the head forming more than one-third of the whole.

"At the end of *three months* the eyelids are distinct but shut; the lips are drawn together; the forehead and nose are clearly traceable, and the organs of generation prominent. The heart beats with force, the larger vessels carry red blood; the fingers and toes are well-defined, and muscles begin to be developed.

"At the *fourth* month the embryo takes the name of *fetus*. The body is six to eight inches in length and weighs from seven to eight ounces. The skin has a rosy color, and the muscles produce a sensible *motion*. A fetus born at this time might live several hours.

"At *five* months the length of the body is from eight to ten inches, and its weight from eight to eleven ounces.

"At *six* months the length is twelve and a half inches; weight one pound. The hair appears upon the head, the eyes closed, the eyelids somewhat thicker, and their margins as well as the eyebrows are studded with very delicate hairs.

"At *seven* months, every part has increased in volume and perfection; the bony system is nearly complete; length twelve to fourteen inches; weight two and a half to three pounds. If born at this period the fetus is able to breathe, cry and nurse, and may live if properly cared for.

"At *eight* months, the *fetus* seems to grow rather in length than in thickness; it is only sixteen to eighteen inches long and yet weighs from four to five pounds. The skin is very red, and covered with down and a considerable quantity of sebaceous matter. The lower jaw, which at first was very short, is now as long as the upper one.

"Finally, at *term* the fetus is about nineteen to twenty-three inches long, and weighs from six to nine pounds. The red blood circulates in the capillaries, and the skin performs the functions of perspiration; the nails are fully developed."

There is a superstition that a child born at eight months is not as liable to live as if born at seven months; indeed, many suppose that an eight months' child never survives. Facts do not prove this idea correct.

Personally I have known several eight months' babies to live and do well, and I believe that their chance of life is much greater than if born at seven months.

Position of the Fetus.—The fetus usually lies with the head downward, the chin resting upon the breast. The feet are bent in front of the legs, the latter flexed upon the thighs. The knees are separated from each other, but the heels lie close together on the back of the thighs; the arms are crossed upon the breast, so placed that the chin can rest upon the hands.

In this way it forms an oval, whose longest diameter is about eleven inches. This is the usual position, yet it often varies from it.

CHAPTER III.

PREGNANCY—SIGNS AND SYMPTOMS.

THE SIGNS OF PREGNANCY are physiological and pathological; physiological, those common to all women; pathological, those which are the result of and accompany diseased conditions.

Of the physiological, the four principal ones are cessation of menstruation, increase of size, quickening, and the fetal heart beat.

CESSATION OF MENSTRUATION in a married woman may ordinarily be considered a sign that conception has taken place. Yet suppression may be the result of cold, of inflammation, of some chronic uterine diseases, more especially dropsy or tumors, also of any slow, wasting disease like scrofula, consumption and diarrhea.

Occasionally, too, women menstruate during the entire time of gestation. This, without doubt, is an abnormal condition, and should be remedied, as disastrous consequences may result. Also, women have been known to bear children who have never menstruated.

The cases are rare of pregnancy taking place where menstruation has never occurred, yet it frequently happens that women never menstruate from one pregnancy to another. In these cases this symptom is ruled out for diagnostic purposes.

INCREASE OF SIZE begins to be experienced at about the third month, when the uterus enlarges and rises above the brim of the pelvis. Any enlargement previous to this time must be due to bloating, flatulence or excess of fat, to which some are inclined in gestation. This sign, taken alone, can not be relied upon as diagnostic. It may be occasioned by various causes, and often accompanies the very same conditions attending menstrual suppression. Instances occur in every town and neighborhood where women have made elaborate preparations for confinement, only to be disappointed by finding they were suffering from some serious disease.

QUICKENING.—The involuntary movements of the child occur from the eighteenth to the twentieth week. Sometimes these motions begin as early as the third month, and then are a feeble fluttering only, causing disagreeable sensations of faintness and nausea. The "motion" of the child is regarded by women, especially if they have previously borne children, as an unfailing sign. But cases are common where the throbbing in a tumor, or the peristaltic action accompanying flatulence has been mistaken for fetal movements.

Unless the *motion* is very marked, quick, elastic and distinct, it alone can not be relied upon as a diagnostic symptom. Taken together with other signs it aids both physician and patient to a positive conclusion.

THE FETAL HEART BEAT.—The sign by which physicians can with certainty determine pregnancy is by noting the difference between the beating of the fetal and maternal hearts. The ordinary pulse of a woman

is from 70 to 80 per minute, while that of the fetus is from 120 to 140.

Auscultation through a stethoscope will reveal this fact, and thus give a certain diagnosis. If it is a throbbing or pulsating in a tumor it would be synchronous with the maternal cardiac action. This symptom is not of much value till after the fourth month. By that time if a physician's ear is educated to fine discriminations, he will never make a mistake in his diagnosis.

I can not leave this subject without urging upon women the necessity of educating their own fingers to judge of the heart's actions by the radial pulse. Get your physician to tell you and study in your books the meaning of a quick, a throbbing, a slow, a weak, feeble and wiry pulse. It is one of the surest guides to abnormal conditions, and is a great aid to nurses in the administration of remedial measures, besides often determining the necessity of medical aid. In my *conversations* with women I often in an audience of 100 ladies find none who know even the frequency of the normal pulse.

The enlargement of the breasts at about the third month, the secretion of a fluid in them, also the darkening of the areola around the nipples are of frequent or usual attendance upon gestation—but not always; consequently can not be taken as diagnostic symptoms.

THE PATHOLOGICAL symptoms are more numerous. Indeed, almost any symptom accompanying any disease may attend gestation. This is a sad reflection upon our enlightened civilization. Were it not for this, Tokology would have no special mis-

sion. The facts now are that with most American women the 280 days of pregnancy are days of disease and suffering. The inconvenience, the discomfort and the pains attendant upon this condition, together with the dread of the final throes of travail, transform this period, which should be one of hope, of cheerfulness, of exalted pleasure, into days of suffering, wretchedness, and direful forebodings. It is one long nightmare, and child-bearing is looked upon as a curse and not a blessing. Motherhood is robbed of its divinest joys.

Dr. Cowan says: "The period of pregnancy should be one of increased health, rather than increased disorders. The mother who has hitherto led a true life, will, during this period, experience an exhilaration of spirits, a redundancy of health and cheerfulness of mind that is not to be enjoyed at any other time." Alas! how few have this experience.

Ordinarily pregnancy is classed both by physicians and women among the diseases. Physical sufferings and mental agonies are the common accompaniments of the condition. Murderous intent fills the mother's heart, and the fearful crime of feticide is daily committed.

Do physicians offer any relief for this state of things? It is a lamentable fact that most do not. In one of my conversational lectures a lady testified that for seven months before her child was born she never knew one hour's relief from nausea—that she was not conscious of retaining any nourishment upon her stomach, and that no day elapsed without vomiting blood. No words can describe her sufferings through all those dreadful weeks, even up to the hour of de-

livery. She consulted three different physicians, and each one told her nothing could be done except to wait for "nature's relief." She went home in despair and suffered to the end. When she heard the theories I teach, with suppressed emotion she exclaimed: "Thank God for the hope you give. To my dying day I shall use my feeble voice to promulgate these truths, that others may not grope in the valley as I have done."

Yes, women can be saved much suffering even during pregnancy. If they study this work intelligently, practicing the precepts therein given, they will ever be thankful for the light and hope obtained.

CHAPTER IV.

DISEASES OF PREGNANCY—INDIGESTION—NAUSEA, ETC.

The most common ailments of pregnancy are dyspepsia, nausea, vomiting, constipation, headache, heartburn, flatulence, salivation, diarrhœa, piles, greedy appetite, loss of appetite, longings, neuralgia, toothache, cramps, swellings of the extremities, pain in the side, insomnia, drowsiness, palpitation of the heart, leucorrhœa, pruritus, etc.

INDIGESTION OR DYSPEPSIA is the most common ailment afflicting the human family. It is at the foundation of almost every other disease, many of the above symptoms of pregnancy being attendant upon and caused by it. Men and women in every station of life are more or less subject to it; few are entirely exempt. "A good digestion turneth all to health." Indigestion is usually attributed entirely to a failure of the stomach to perform its functions. The term is also applied to a defect in any of the assimilative operations throughout the digestive tract. The limits of this work will not permit a dissertation upon these processes and their abnormal conditions.

In passing, however, let me say while there are many causes of dyspepsia, there is no one more potent than the common attempt to nourish the body from food which can not be digested in the stomach.

The principal articles upon which the acid gastric juice has no effect are starch and fats. They can be rendered soluble in alkaline fluids only, which are the saliva, pancreatic juice and the bile. By partaking of starch and fats to excess, the stomach is overtaxed in expelling them, besides which the body fails to get elements of nutrition in proper proportions from them.

The natural food of the infant contains no starch, the carbonates of milk being sugar and butter. Usually the first solid food given to a child contains little else but starch, such as bread from white flour, and potatoes, rendered more indigestible by the addition of butter and rich gravies. These are lacking in nitrogenous and saline products, consequently the muscles, bones and nerves are insufficiently nourished.

A substitution of the products of the entire wheat, barley, oats and other grains would obviate this difficulty and lessen the frightful mortality of children. Dr. Bellows says: "So perfectly ignorant are people generally of the laws of nature that they give their pigs the food which their children need to develop muscle and brain, and give their children what their pigs need to develop fat. For example, the farmer separates from milk the muscle-making and brain-feeding nitrates and phosphates, and gives them to his pigs in the form of buttermilk, while the fattening carbonates he gives to his children in butter. He sifts out the bran and outer crust from the wheat, which contains the nitrates and phosphates, and gives them also to his pigs and cattle, while the fine flour containing little else than heating carbonates, he gives to his children. Cheese, which contains the concen-

trated nutriment of milk, is seldom seen on our tables, while butter, which contains not a particle of food for brain or muscle, is on every table at all times of day."

Cheese when digested furnishes more muscle-feeding properties than any other food, and hence is desirable for working men, but should be taken as food, not as a relish only. Few people of sedentary habits, however, digest cheese readily.

The elements digested in the stomach are fibrine (its type found in lean meat), albumen, casein, gluten of the grains, and the nitrogenous principles of fruits and vegetables.

These are the elements that build up the muscles, while the carbonaceous elements, such as sugar, starch and fats, by combination with oxygen, furnish animal heat. Too much of the latter tend to produce inflammatory conditions, and should be partaken of moderately by all people who do not lead an active out-door life.

The pregnant woman, however, is especially liable to suffer from the multiform miseries of dyspepsia. Her nervous organization is peculiarly sensitive at this time. Many symptoms are also caused by reflex action from the gravid uterus upon the sympathetic ganglia which control the alimentary processes.

MORNING SICKNESS.—Nausea, with or without vomiting, occurs so frequently in pregnancy that most women think it a natural accompaniment of their condition, relying upon it as a diagnostic symptom. It may begin the day following conception, but usually appears from the sixth to the eighth week. It is unlike nausea which accompanies biliousness,

fevers, the effect of drugs, or even sea-sickness. It is a nausea that one feels from the crown of the head to the soles of the feet; one is "sick to the stomach" all over.

Asking the cause of this, ninety-nine out of a hundred aver they believe it to be natural, and more than all, not to be avoided. Besides, the *grandmother* of the neighborhood has told them that on account of this, the child will be more healthy, and the delivery easier. Facts do not bear her out in either assertion.

The real causes are to be sought in the violation of physical laws, in dress, diet, exercise, etc. The conditions are, first, an irritation in the womb caused by some existing derangement, which by sympathetic or reflex action is communicated to the stomach, and second, that state commonly called biliousness.

The whole body is supplied with nerves distributed from the brain and spinal column. Besides these, ganglia of sympathetic nerves communicate with all nerves and with each other, being so interlaced that almost every part of the body is in communication with every other part. It is really a complete system of telegraphy. Both the uterus and stomach are remarkable in their supply of nerves, and any disturbance in the former is instantly conveyed to the latter.

It is not unusual that an inflammation, a congestion or displacement of the womb gives no local symptoms—but by reflex action there are headaches, indigestion, neuralgia and various ailments. So, of the gravid uterus, if from any existing local disease or any cause in the system it does not take kindly to its new function, and hyperæmia and irritation ensue,

instead of causing local pain and distress it will be communicated to other organs, most frequently to the stomach, producing nausea, vomiting, as well as often acute suffering.

What is *biliousness?* Ladies, you know the condition to which you apply this term. Frequent headaches, aversion to food, aching of the bones, languid, sleepy and tired feeling. You get up in the morning weary, cross, irritable, out of sorts with everybody, and everybody retaliates by being out of sorts with you. What has happened in the human organism? What do you understand by biliousness? Listen to the answers. One says, "It is an overflow of bile," others, "Too much bile," "The liver don't act," "The bile has reverted back to the blood," "The bile is secreted by the stomach," "Too high living," etc.

Dr. Dio Lewis says: "Biliousness is piggishness." My habit has been to define it simply as *overfeeding.* At least, the elements of the bile are in the blood, in excess of the power of the liver to eliminate them. This may be caused by either inaction of the organ itself, or superabundance of the materials from which the bile is made. Being thus retained the system is burdened, or to use a homely but expressive phrase, is *clogged.* To produce this, food may be too great in quantity, or too rich in quality. Especially is it caused by the excessive use of fats and sweets. How does this biliousness produce nausea in the pregnant woman, and why does it show itself in this way, when she was comparatively well previous to this condition?

In the new process of gestation the whole system is roused to action, and nature makes an effort to re-

lieve the organs of all foreign or *bilious* matter. Her first means to produce this result is by nausea and vomiting. Many women have an attack of bilious fever, more or less severe, in the first months of pregnancy.

Three causes may induce this state of the system: food which is too nutritive or too abundant; lack of exercise conducive to normal action in the assimilative organs; and clothing that in any way restricts this action. At any time, the bands and corsets so universally comprising a part of woman's dress are injurious, because they restrict the action of the liver and other organs, but they are doubly deleterious when there is a natural increase in size. The direct pressure of the viscera upon the uterus will also produce irritation in that organ.

I was spending a few days with an old friend who was four months advanced in pregnancy. She had had no unpleasant symptoms. One day as we were on the street walking, she was suddenly seized with vomiting. Trying to investigate the cause I asked her if she wore the dress she was accustomed to. "No," she said; "I have not had this on for months, and it is too tight." She loosened it under her cloak, and had no more trouble.

In the last months of pregnancy, vomiting is often caused by pressure of the enlarged uterus upon the stomach. This cannot occur where the natural figure has always been unquestionably preserved.

One potent cause of morning sickness is the habit of entering upon the sexual relation frequently during gestation. By this means a hyperæmia in the reproductive organs as well as exhaustion of the nerve

supply is produced. By reflex action nausea is the result. Incalculable benefits would be derived if married people imitated the lessons of lower animals in this matter—thereby conserving all forces for the benefit of offspring.

TREATMENT FOR MORNING SICKNESS.—If inflammation or ulceration of the uterus is chronic, one can not expect to overcome the nausea entirely in a short time (Chap. XXI).

IN THE CASE OF BILIOUSNESS, a plain, light diet with plenty of acid fruits, avoiding *fats* and *sweets*, will ameliorate if not remove it. Don't force the appetite. Let *hunger* demand food. The sensitiveness of the gastric nerves may be relieved by taking before rising a cup of hot water, hot milk, hot lemonade, bran gruel, rice or barley water, selecting according to preference. Or what is probably better than any other drink for this purpose, coffee made from browned wheat or corn. Depend for a time upon liquid food that can be taken up by absorbents.

The juice of lemons and of other acid fruits is usually grateful, and assists in assimilating any excess in nutriment. These may be diluted according to taste. With many, an egg lemonade proves relishing and acceptable.

IN BILIOUSNESS, with or without nausea, hot fomentations in the region of the stomach and liver, for an hour once or twice a day, followed by tepid bathing and hand friction, will be found invaluable.

WARM OR HOT ENEMAS are exceedingly beneficial. In order to be effectual, follow minutely these directions. Place in a Fountain Syringe two or three quarts of soft water as warm as can be taken. A

tablespoon of salt will make it more effective. Suspend the reservoir as high as the hose will allow. Lie upon the right side with knees flexed. Introduce the long rectal tube, or what is better for many, the vaginal tube far enough in the rectum to pass the internal sphincter muscle. It ought to enter three or four inches. Let the water pass into the bowels slowly, having them manipulated upward by an attendant, especially making passes up the right side.

This causes the water to pass through the ileo-cæcal valve from the large to the small intestines. Once in the latter, it is taken up by the capillaries of the portal vein and more or less of it conveyed to the liver. This stimulates a secretion of bile and it is not unusual for five or six free evacuations to follow. It is quite as effectual as an active purgative without any poisonous results of the drug. This enema should be retained from twenty minutes to half an hour. It is also much more efficacious when preceded by the use of a hot fomentation over the liver. This injection is an exceedingly valuable remedial agent both in acute and chronic difficulties. By its use in sick headache, bilious colic, congestions in the stomach or abdominal viscera, the physician's visit and fee will often be saved.

The exercises recommended in Chap. V, for constipation, are invaluable for biliousness.

Before closing this chapter let me repeat and emphasize, "*Do not force the appetite.*" Food which neither relishes nor digests will do more harm than good. Tradition and prejudice have all conspired to so engrave in your being that you must not only eat, but *stuff*, because you are eating for two, that both

you and your friends think food *must* be taken at all hazards. So, what is your custom? You rise in the morning sick and disgusted. The very *smell* of food is intolerable. Still you eat at the table instead of getting away from it, and eat probably beefsteak and hot bread, washed down by a cup of coffee. Of course you must take what is the most nourishing! These are scarcely swallowed until you have proofs that so much provision is wasted.

By nine o'clock you make another attempt. You go to the pantry, find some cold chicken, a piece of lemon pie, and a pickle. But no, the stomach refuses these. At eleven o'clock a confidential friend calls. She commiserates you, and knows that both you and the fetus will starve. She goes to her own larder, brings you a piece of pound cake, some custard and jelly; possibly, a piece of mince pie. Do these share the same fate? Perhaps not. Her cheery laugh and neighborly sympathy, and the more propitious time of day make it possible for this to be retained. But pause, my friend. Has the blood received the best nutriment for building a healthy organization for yourself or child?

Very little, if any, extra food is essential to nourish the fetus, especially the first few weeks of pregnancy. The total average increase of weight is less than one-half an ounce a day, and one-fourth of this would be an approximate estimate for the first three months. It can readily be seen that simply the suppression of the menses would give nearly, if not quite, all the extra nutriment for the first few weeks, at least. Appropriate food, and proper conditions for assimilation are far more important than increase in quantity.

CHAPTER V.

Diseases of Pregnancy.—Constipation.

Constipation of the bowels is not only a frequent attendant upon pregnancy, but is a common ailment of both men and women. From year to year this symptom is on the increase, until fully nine-tenths of the American women and one-half of the men are afflicted with it.

Every person should have a free, soluble, satisfactory evacuation of the bowels daily. In pregnancy especially, *not for one day* should constipation be allowed.

Constipation is usually the first notice of bodily derangement, and may be the precursor of a chronic state of ill health. The approach, too, of this affection may be insidious, existing when the subject is not aware of it. The evacuations may be regular yet not sufficiently free and copious to be compatible with health.

The slightest torpidity of the bowels results in retention of residual matter, which becomes reabsorbed into the system, acting as a foreign and poisonous substance. Other organs of elimination must, on this account, be overtaxed in the vain attempt to overcome the obstruction.

The urine becomes thick, turbid and highly colored, if not offensive. The skin emits an offensive

odor and sooner or later becomes dry and scaly. The surface, from obstruction of the pores and venous capillaries, is alternately hot and cold, making the person sensitive to drafts and changes in temperature. The lungs must do double duty and the breath is loaded with offensive exhalations. Here is the beginning of most cases of catarrh, bronchitis and phthisis. Indeed, there is no disease of the human organism which may not be traced to constipation.

What are the principal causes of constipation?

Mainly sedentary habits, errors in diet, overtaxed brains, the use of cathartics, and in women *errors in dress.*

Many persons, even some authors upon the subject, consider that constipation is the result of torpidity of the liver only, causing a lack of bile furnished for diluent purposes. While this is frequently the case, still there may be a diminution in the pancreatic juice as well as in the secretions peculiar to the intestines, causing a lack of moisture in the excrement.

There may, too, be lack of bulk in the residual matter to be acted upon by the fluids and impelled by the muscular coats of the intestines; which, again in their turn may want power to perform their peculiar function. In a *sedentary life* the weakness of these muscles is enhanced, and respiratory power is lacking. All processes of digestion depend upon deep breathing, which stimulates action in the abdominal viscera. Any exercise that tones or develops the involuntary muscles of breathing is an incalculable adjuvant to all the functions of the body. The person of sedentary habits not only loses the advantage of exercise but is usually engaged in some occupation that gives great

strain upon the nervous organization. This takes away the nerve stimulant so essential to assimilative processes. Dr. James H. Jackson in his admirable treatise upon constipation, in speaking of the effects of *occupation*, says:

"It is not the man or woman who lives regularly, eats temperately, and exercises the brain moderately or even severely, if the habits are correct, and sufficient out-door air and exercise are had to oxygenize the blood and keep up muscular tone; it is not the muscle-worker, the agriculturist, the mechanic, the machinist; it is not the maid of all work, as a general thing. It is the brain-worker—the lawyer, merchant, doctor, banker, minister, teacher; it is the man who sits in his office or works in his store or shop in poor air and light, having little or no muscular exercise, who constantly thinks, is anxious, worried, careworn, a victim of the intense competition and excitement which modern business life imposes; it is the wife and mother who lives in the house all day, who is continually worried by household cares and anxieties, who is *socially* taxed and excited; it is she who idles away her time, passing it in in-door indolence, who dresses unphysiologically, eats badly, feeds upon sensational literature, and lives under the reign of her emotional and passional nature; it is the poor factory girl or seamstress plodding away through weary days, in stifling air and on starvation diet, as of baker's bread and tea, debarred from all out-door recreation; or the school teacher who barely earns her living, though she works brain and nerves, almost daily, to the point of exhaustion. In these classes, subject to unphysiological habits of work, want of recreation, unfavorable

surroundings, irregularity in eating, sleeping, etc.—more from lack of knowledge than from necessity—are found the victims."

IMPROPER FOOD, prominent in the causes of constipation, poisons rather than nourishes the body, inducing congestion of the alimentary canal by the irritation set up.

Highly seasoned food and stimulating drinks excite extra secretions when first taken, but the reaction or secondary effect of the overstrain is torpor, and consequently absence of secretion. Notably, too, we have the same effect from aperient drugs. Even the too free and constant use of salt causes a dryness of the intestinal canal, probably from the fact of its stimulating power. Nature daily attests this statement by the demand for drink after partaking of salted meats, fish, etc.

Food lacking in elements of nerve nutrition proves constipating; foods that are too concentrated are usually those that are highly carbonaceous, notably *fats* and *sweets*, as well as those abounding in starch. In these the insufficient residue fails to furnish the needed volume to fecal matter. The absence of water, too, furnished by vegetables and fruits, causes a dryness of the contents of the intestinal canal, which of itself is an impediment to their onward passage through the bowels.

Of these carbonaceous foods, pastry, cakes, hot bread and white flour bread stand prominent. As elsewhere stated, hot breads, starch and all of the fats do not digest in the acid fluid of the stomach. Passing into the duodenum the alkaline bile and pancreatic juice emulsify and liquify them. If the quantity of

these substances taken be too great there will be much the same result as the soap-maker gets when he puts in his kettle too much fat for his lye. The substances are not dissolved, and can not be taken up by the villi of the intestines for nutrition, and a concentrated mass lacking residuum passes into the excrement.

The prevalent, if not foolish fashion of using only bolted or white flour for bread, a flour abounding in starch and lacking in gluten, is largely the cause of indigestion and constipation. The gluten lies next the bran and contains the nitrates and phosphates which digest in the stomach and feed muscles, brain and nerves, while the bran itself furnishes residuum for fecal matter.

Another factor especially answerable for the recent increase of constipation, is the prevalent use of baking powder. This makes a beautiful, light, friable and delicious bread, requiring but little time or care in its preparation. If adulterated with alum, astringent effects follow. Even in a pure powder, we have an acid and an alkali, which, after chemical union has taken place, leaves a residual salt that has a depressing influence upon the nervous system. A sensitive person not accustomed to the use of bread from yeast powder, even if eaten cold, will in a few hours feel depressing influences, upon both mind and body.

Dr. Beaumont, who had the privilege of watching the process of digestion in the stomach of Alexis St. Martin, tells us that "hot bread does not dissolve in the fluids of the stomach." This is owing to the presence of carbonic acid gas in the bread, and to the fact that it is not friable, consequently becoming an

insoluble, doughy mass that can not be permeated by the gastric fluid. Of course it passes in this state into the intestines, and much of it must become waste material. It is estimated that 8,000,000 lbs. of baking powder is used annually in the United States alone. What wonder is it that dyspepsia and constipation are on the increase!

Fat meats, dried and salted meats, are constipating. Fresh poultry has a like effect. There are few persons who do not remember the old time practice of arresting the action of a cathartic drug by the use of a chicken broth.

Eggs and milk are constipating to many. The latter is especially so if boiled or if the two articles are combined in custards, puddings, etc. Among the vegetables, beans are constipating. This, however, is largely the result of the mode of preparation. They are not sufficiently cooked, and the fat incorporated with them renders them indigestible.

Potatoes, especially if prepared with butter or grease, have a like effect. Cheese is constipating to many, also chocolate and cocoa. Of the fruits, blackberries and raspberries are constipating, especially if the seeds are taken. More than any other articles of diet, these induce and aggravate hemorrhoids.

THE ERRORS IN DRESS conducive to torpid bowels, are lack of covering to the extremities, and excess of clothing in the abdominal region, thus favoring congestion of the vital organs. Garments that are tight and improperly supported restrict respiration, infringe upon all the digestive organs, and impede the circulation.

When women are freed from the trammels of dress, they will have taken a long stride toward freedom from invalidism. Is it Utopian to hope that it will also aid in giving them both political and social freedom?

A very common means taken to overcome constipation only increases it and renders it less amenable to common sense treatment, and that is the prevalent use of *cathartic drugs*. "They all depend for effect upon a certain quality they possess of exciting secretion and peristaltic activity. Of course they do this through the nervous system, few if any of them being mechanical in their action, but accomplishing their results by stimulating the nervous system to extra effort. In doing this, they necessarily exhaust the source of supply; for the tendency of all stimulation is to induce exhaustion as the consequence of unnatural exhibitions of nervous force. Persons using these so-called remedies—laxatives, cathartics, and purgatives—thus securing temporarily the movements of the bowels, find that after their use it is more difficult to secure natural passages, and that the dose must be increased to produce any effect. Meantime the continued use of these drugs not only exhausts nervous force, but often creates inflammation of mucous surfaces, disturbing digestion, and poisoning the blood." This is more especially true of the saline cathartics.

Such cases are much more rationally, comfortably and effectively treated by the use of enemas. (Chap. IV).

Pregnancy aggravates or causes constipation, by reflex nervous action from an irritable uterus or

mechanically by pressure of fetus upon the colon or rectum.

Other causes of this difficulty will be thought of—such as excessive exercise, violent emotions, as anger, grief, etc., wounds in any part of the body, irregularity in meals, late suppers, eating between meals, etc., etc. Practically it is not essential to enter into details in regard to them. No matter what the cause, all will experience benefit in adhering to the following hints upon the

TREATMENT OF CONSTIPATION.—First ascertain the cause or causes, and remove them. One might as well expect to cure a burn, while pouring scalding water upon it as to cure torpid bowels if the cause remains. Every person should establish the habit of

REGULARITY IN SECURING EVACUATIONS.—The nervous system acts under the law of periodicity to a large degree in controlling the functional operations of the body. This tendency should not only be generally heeded, but utilized in regulating the bowels. A little intelligent care will generally secure a call for defecation at a specified time, which may be established to suit convenience, and which once established, should not be allowed to pass, except for most urgent reasons.

The number of evacuations per day will vary with the quality and amount of food consumed, and the vocation and temperament of the person. If two evacuations each day is the rule, then one should be after breakfast and the second shortly before the regular retiring hour for the night. If only one evacuation each day is the habit of the person, then if convenient, let it be the hour before retiring, unless

a satisfactory habit is already fixed at some other hour. There are few things that promote good, sound, refreshing sleep, like a thorough emptying of the bowels before going to bed.

If one would *prevent* constipation and its evils, this practice should be heeded; and if one would *cure* constipation, it should be enforced in connection with any other necessary measures, as follows: "Go to the closet at the appointed hour, sit for a few minutes, gently straining to effect a passage. The practice of forcing an evacuation by severe muscular effort is all wrong, and should never be indulged. Far better take an enema of water if necessary. The practice of sitting long at stool is also to be condemned. The bowels may be made lazy in this way, and it leads to waste of time and to hemorrhoids. If not successful, go till the next day at the stated hour if you comfortably can; then try again, and if you do not succeed, take an enema of water sufficient to produce the desired movement. The next day repeat this effort at the given time, and so continue."

I am more and more convinced that *all* straining should be avoided. When the bowels do not move readily, wait a few moments passively for *nature's call*, avoiding all anxiety in the matter. Should this method fail, then, by will power, press the sphincter muscles back by short, quick, and repeated movements. This will lubricate the rectum, force back the feces, and shortly after result in a satisfactory discharge of the bowels. A little practice will bring these muscles under complete control, and by this means a habit of constipation may be cured. This same course is also found very beneficial for piles.

Other simple measures will overcome constipation, especially if of recent origin or of mild form. Drinking one or two glasses of cold soft water before breakfast is often sufficient. Some eat ice for the same purpose. These are diluents, besides acting upon the nerves producing contractile effects of the muscular coats of the digestive tract.

With others, eating a raw apple or orange before breakfast is sufficient. Drinking a glass of water, into which a tablespoonful of bran has been stirred, is very efficacious for some. A lady in Iowa had had very obstinate constipation for years. Allopathic and homeopathic remedies had no effect. Exercise and the strictest hygienic living seemed equally of no avail. If, however, before eating her breakfast, she would eat half a cup of bran stirred in water or milk, the desired result would be obtained. This affords *residuum* for the alimentary canal, as well as mechanical stimulus to the mucous coat.

In long standing, obstinate cases, these simple remedies will not suffice. There must be an entire and radical change in diet as well as other rational measures used to overcome the conditions.

Our native wheat meets the need for this change, perhaps more fully than any other food, provided the whole of the grain is used. Such preparations of it may be found in varied and attractive forms, first among which, because almost everywhere procurable and easily prepared, is graham flour. Complaints are sometimes made against this excellent and nourishing food, that it is too harsh for delicate stomachs.

The complaint should rather be made against careless and ignorant millers, who put upon the market

an article ground from their lowest grade of wheat, often too, without proper cleaning. When the best wheat is properly scoured and prepared by a skillful miller, very few will find difficulty in its digestion. Rolled or cracked wheat, wheatlet and flour of the entire wheat, are very useful in establishing a correct habit.

In these the gluten which lies next the bran is preserved—this contains the nitrates that feed muscular tissues and the mineral product that nourishes and sustains the nervous system. For constipation, these foods are the natural remedy and preventive, as they give the ganglionic nerve centers nutriment, and hence enable them to preside over the functions of digestion.

Entire Wheat Flour, Franklin Mill Co., Lockport, N. Y., fulfills these conditions, and is one of the noblest additions to the foods of the world. The grain is denuded of the outside silicious bark and then ground into a fine flour, and all the elements of the grain are preserved.

Wheat, more than any other article of food, furnishes all the elements and in the right proportion required to nourish the body. In bolting the flour to make fine white flour, four-fifths of the gluten, the very most nutritious part of the grain, is taken out to be fed to cows and hogs.

Dr. Ephraim Cutter, of Harvard, in an able illustrated article on "Cereal Foods" in the *American Medical Weekly* says: "The gluten of cereal foods is their nitrogenized element, the element on which depends their life-sustaining value, and this element is, in the white and *foolishly fashionable flour*, almost en-

tirely removed, while the starch, the inferior element, is left behind and constitutes the entire bulk and inferior nutriment of such flours. To use flour from which the gluten (in the bran) has been removed, is *almost criminal.* That it is foolish and useless needs no further demonstration. In sickness, and in the sickness of infants especially, starch is highly injurious, while gluten is life-giving and restorative."

In the valuable article from which the above extract is taken, microscopical examination is given of forty-four kinds of flour and health foods. Of the Franklin Mill Co. flour he says: "The field is filled with gluten cells. Repeated examinations prove this to be the *best flour* examined." One can readily see, being more nutritious, in point of economy, even, this flour is invaluable. It is preferable for making anything that is ordinarily made from white flour. Makes better pie crust, better cake, and griddle-cakes, and for toast, pudding and gems, has no comparison with other flour. Still further, what will with many be considered the best argument for its use, the taste of this flour is sweeter and more "nutty." Once accustomed to the "Flour of the Entire Wheat," white flour seems tasteless and insipid, and none will return to its use from choice. Hundreds of cases within my knowledge attest to this fact.

The effect of this food in alleviating and curing constipation is something of which all should know. A family at one time came to live near me in which was a baby boy about sixteen months of age. I was attracted by his pretty ways, but saw that he was far from well, his skin being white and waxy, his

flesh puffy. I said to the mother, "Your little boy is not well."

"Do you think so?" she answered in surprise. "Everybody thinks he looks so well."

"He certainly is not well with that appearance of his skin. What is the matter?"

"Why, nothing at all, except that he is dreadfully constipated, and has been for months. His bowels do not move oftener than once in two or three days, and then he suffers terribly, screaming and crying piteously. His rectum often protrudes, and blood comes with the passage."

"Poor little fellow. That will never do. What do you feed him?"

"Mostly bread and milk."

"White bread?"

"Yes, baker's bread."

"Did you ever use bread of the entire wheat flour?"

She had never heard of it but was willing to try anything that might give relief. I sent her a nice loaf, and not only the baby but all the family enjoyed it. The mother desired to learn how to make the bread, and Wally soon made his chief living off it, and was in a short time, without the use of any other means, entirely cured of his distressing ailment. After that a sweeter, more joyous baby I never saw, hearty and happy; roses supplanting lilies on his cheeks, his flesh becoming firm and hard, and his fretful, nervous temper growing sweet and even. The happy mother could not sufficiently attest her gratitude, saying many times that she should always be glad that she moved into our neighborhood, sim-

ply on account of having learned of this one useful article of diet.

WHEATLET, a new preparation which is manufactured by the Franklin Mill Co., of Lockport, N. Y., meets a demand for a food adapted to the relief of constipation. It is equally good for the use of dyspeptics and those who are nervously debilitated. It is rich in the nitrogenous and phosphatic elements of the wheat, and being highly nourishing, strengthens the nerve system which presides over the organs of digestion. For some stomachs in a diseased and highly sensitive state, it is preferable to cracked wheat or rolled oats.

CRACKED OR ROLLED WHEAT stands with or above the entire wheat flour, in its value to overcome torpid bowels. Often by making no other change in diet, but adding this one article properly cooked, constipation will be entirely removed. I have been recommending it for thirty years with uniformly satisfactory result. In a family with whom I staid while lecturing in Southern Illinois, was a bright boy three years of age. The next morning after my arrival, the mother entered my room, her face the picture of despair.

"Can you, doctor, tell me anything I can do for Charlie? For nearly twelve months he has not had a natural passage. Strong cathartics have ceased to have any effect, and he has a terror of enemas."

I noticed the night previous that the child ate a late supper, consisting entirely of cold mutton and sweet cake. I wondered then if it was possible he could feed on such food and be well. I said to her, "Have you tried diet?"

"Only to give him figs, and these he dislikes. I don't know what to give him."

Alas, how many mothers do not know!

"Do you not ever use graham bread?"

"None of us like it."

"Have you ever given him cracked wheat?"

"I never heard of it."

"Send and get a package. I will show you how to cook it, and we will all lunch upon it."

Charlie ate of it, not freely, for his lunch and supper. The following day he had two natural, easy evacuations. I counseled her to give him less meat and cake, have him eat the wheat at least once a day, and partake of more fruit. Months afterward she reported no return of the constipation. Oftentimes it is the simple things that are the most effectual.

FEAST ON FRUITS! Would that this could be a motto upon the wall of every dining room in the land! Next to the whole of the wheat, fruit is the best laxative to the bowels.

Dr. Jackson says: "I advise the use of fruit in the morning if taken only once a day; but I heartily approve of its forming a part of every meal, though I strongly condemn the indulgence in fruit between meals."

I coincide with him, and *emphasize* by saying *feast on fruit freely!* Don't stint the supply to *sauce* dishes. Use large saucers and not only once full but twice or thrice full at every meal. Acid fruits are preferable. They are the staple, and properly prepared, one never tires of them. The acid of the fruit is largely oxygen, and uniting with the carbon of other food, in this way assists in digestion.

For constipation some of the dried fruits well cooked are valuable. Of these peaches, plums, prunes, apricots, etc., that are rich in hydrocyanic acid, are preferable. Get the best, stew several hours. Never prepare a meal without it. Do not say it is expensive, and you can not afford it. Take half the money you put in meat and lard, and purchase fruit. You will get interest and principal returned in health for yourself, in rosy, buoyant children, and noticeable absence of doctors' fees.

Most of the garden vegetables are also valuable. Rhubarb, onions, tomatoes, asparagus, green peas, squash, cauliflower, green corn, etc., etc., are good, and should be well cooked without butter. Avoid potatoes and beans. The fruits and vegetables supply water, laxative in its effects upon the mucous surfaces. They increase the residual matter of the excrement, and supply stimuli for peristaltic action.

Avoid strong tea, especially if steeped a long time. Tannic acid is developed, giving an astringent effect. *Coffee*, especially the higher grades, in the occasional use, stimulates the bowels to action, but the *habit* of taking strong coffee gives the secondary effect, and torpidity is the result.

It may be a wise provision of nature that the poorer and cheaper the coffee, the less deleterious is its character. Java and Mocha may be really poisonous to an individual, while Rio is quite inoffensive. Most of the adulterations of coffee are harmless. One "feasting on fruit freely" will not feel the need of any drink at meals, and in *total abstinence* great gain will be made in overcoming symptoms of indigestion.

LAXATIVE.	CONSTIPATING.
Rolled and cracked wheat.	Hot bread.
Bread, gems, biscuit, griddle cakes, crackers and mush from flour of the entire wheat, and graham flour.	White bread.
	White crackers.
Granula.	Black pepper and spices.
Bran gruel and jelly.	Pastry made of white flour and lard.
Fruit puddings.	Bread, rolls, dumplings, etc., made with baking powders.
Fruit pies.	
All fresh acid fruits, including tropical fruits, like bananas, oranges, lemons, etc.	Cake.
	All custard puddings.
Dried figs.	Salted meats.
French prunes and prunellas eaten raw.	Salted fish.
	Dried meats.
Stewed dried fruits, containing hydrocyanic acid, of which peaches, plums and prunes are the best.	Dried fish.
	Smoked meats.
	Poultry.
New Orleans molasses.	Cheese.
Rhubarb.	Chocolate.
Onions.	Cocoa.
Celery.	Boiled milk.
Tomatoes.	Tea.
Cabbage, *raw*.	Coffee.
Corn.	Coffee made from wheat, corn, barley, toast, etc.
Squash.	Beans.
Cauliflower.	Potatoes.
Green peas.	Farina.
Spinach.	Sago.
Beets, etc.	Starch.
Liver.	Tapioca.
Oysters.	Rice.
Wild game.	Raspberries.
	Blackberries.

Lean fresh meats, fresh fish, eggs, raw milk, oatmeal, barley, buckwheat, corn meal, and sweet potatoes have no marked action either way, unless in exceptional cases.

APPROPRIATE AND SUFFICIENT EXERCISE is next in importance to having proper food in overcoming constipation. General and habitual exercise is essential to promote good circulation, a healthy nervous tone, complete respiration, and also power and elasticity of the muscles. The stomach, liver, and indeed all the alimentary tract require also local exercise in order that a healthy standard may be gained and maintained.

The worm-like or peristaltic action of the intestines is produced by the contraction of the muscular coat. It is by this action that the contents of the canal are carried forward. Is it not plain that if exercise can develop the muscles of the arm or leg it can give tone and power to *these* muscles as well? Dr. Taylor, in "Health by Exercise," says: "It is a curious and most interesting fact that children and young animals, whose desire for motion is inherent, are inclined chiefly to those exercises, and those positions which necessarily affect the abdominal contents.

"It is in such exercises as *climbing*, *rolling*, *crawling*, *jumping* and *playing* generally that these contents are most disturbed. We are convinced that the means prescribed by nature will secure healthful development and power in these most essential parts of the body. As if to insure these healthful effects, nature has ordained that by *respiration*, as an efficient and constant means, these motions shall be secured to the alimentary canal. The abdominal contents may be considered as being located between two great muscular organs, the diaphragm and abdominal walls. These muscles act conjointly and *simultaneously* and upon all the included parts, causing them

to play incessantly upon each, and subjecting them to a constant and gentle pressure."

Deep breathing, using the diaphragm and abdominal muscles, of which the majority of women have no practical knowledge, gives the most efficient exercise to the digestive tract. The A, B, C of health lessons is in *deep natural respiration.* The lungs must be *filled to the bottom*, and the involuntary muscles of breathing brought into action. The most eminent vocal teacher of this country asserts that in breathing "the main action should be at the waist and below the waist." Animals and children have this natural breathing. Men and women lose it from lack of exercise, and constrictions of dress. *Health, strength, longevity* and *power of endurance depend mainly upon lung capacity.*

For constipation, those exercises must be taken that develop the diaphragm and other respiratory muscles, that strengthen the muscles of the abdomen and trunk as well as the muscular tissue of the intestines themselves.

SPECIAL EXERCISES FOR CONSTIPATION.

1. Lying upon the back, with abdomen relaxed, have bowels thoroughly kneaded; make rapid, gentle movements with balls of the fingers and palm of the hands, not the knuckles.

2. Same position, move diaphragm up and down without breathing. This requires a little experience and can be aided at first by external pressure of the hand, following the motion. This is one of the most desirable for the object required, and must not be

abandoned because of a few failures. The diaphragm can be taught to obey the will.

3. Reclining on the back on a spring bed; flex the knees, inflate the lungs; move hips up and down with the springs twenty or thirty times. This can be performed by even quite a weak person, and is beneficial to the strongest. Brings into action moderately a great variety of muscles.

4. Flex the knees and elevate the hips, resting the body on shoulders and feet. Move slowly up and down ten times. Hold to count ten, and then rest to count the same. Lungs with this had better be inflated. No exercise is more valuable for developing deep breathing. Sick and well would be benefited by taking this exercise morning and night.

5. Stand with toes at angle of 45°, knees together, hands crossed upon the back. Bend the knees. The body is kept perpendicular and slowly descends until sitting upon the heels. Then slowly straightened, keeping trunk in same position. Count four with each movement, and from four to ten with the rest. This is a severe exercise, and needs to be taken cautiously at first by the invalid. There is no better, however, for torpid bowels.

6. Stand as before. Palms of hands placed over lower ribs, fingers forward. Inhale through the nostrils and expand the waist as if to burst the belt. Expel the breath slowly and assist it by pressing with the palms against the ribs.

7. Same position; inhale through the nostrils; retain, to count twenty; expel through the mouth as whispering the syllable Hoo! to a person forty feet away.

8. Sit on the floor; limbs horizontal and parallel; lungs inflated; hands joined over the head; move backward and forward slowly as far as possible; rest; same position, move sideways.

9. Horizontal position on back; hands clasped over the head; raise both feet and head at same time making the body assume a curved shape; hold to count ten; repeat this only five or six times at first. This is a powerful exercise, affecting the abdominal viscera and general circulation.

10. Lie in the horizontal position; hands clasped over the head, the head and heels only resting on supports, as two stools, while the body is quite free; hold in this position from five to ten minutes, according to strength, practicing waist breathing; at first one might place the stools nearer together.

11. Kneel with one leg, place the other forward with the foot firm upon the floor; arms parallel, stretched upward to the side of the head; move backward and forward slowly, while counting four to each movement, and for rest; repeat three or four times, and change to the other knee. This is a good exercise for hips, groin and lower abdomen.

12. Upon both knees wide apart, hands on hips, fingers forward. Move quickly from right to left, and back as far as possible. This is a good exercise for liver, spleen and muscles of the side.

Nos. 5, 10, 11 and 12 should not be attempted by a weak person until the balance has been practiced at least a month, and then begin with caution. All these exercises should be taken in a loose wrapper. There must be no restraint upon any part of the body. One walking or working need not be de-

terred from taking them. They bring into action unused muscles, and consequently rest those that have been overworked. I knew a lady who did much of the heavy labor of a large greenhouse. She never retired without performing similar gymnastics to the above. She claimed that they rested her by the derivative effect, and the sleep that followed was more satisfactory.

Women can not expect to successfully and permanently overcome constipation, if the organs are in any way restricted by dress. Nature's laws are inexorable, and the penalty of violation must be paid. See Chap. VII.

Do not resort to drugs, even for temporary relief. Almost all aperient medicines act through the nervous system, stimulating the secretions to increased flow. All stimulation of the nervous system is followed by a corresponding or increased depression. In consequence the torpor of the bowels is worse after a few days instead of better. If people would only note *real* results, instead of *seeming* ones, very little medicine would be taken, at least such as has only palliating effects.

In constipation, until permanent benefits can be obtained by the means proposed, if it is necessary to have temporary relief, resort to enemas in preference to drugs. A small quantity of tepid water will usually remove the contents of the rectum. If a thorough evacuation is desired, follow directions on page 48.

Retaining a pint of warm water over night has proved beneficial in many cases. Very obstinate impaction in the rectum can be relieved by injecting

from one to two ounces of linseed oil in the rectum, and retaining it over night. Use a child's rubber piston syringe for this purpose.

Making one meal of raw grains often proves invaluable in constipation. Many persons are adopting for diet, what they call Edenic food. They live entirely upon uncooked food, claiming that it gives natural nutriment, and overcomes morbific conditions. For many years I have occasionally recommended the use of raw grains, rolled oat or wheat, for constipation, nervousness, sleeplessness, etc. It serves its purpose best by being eaten dry, but may be taken with honey, fruit juice or raw milk.

Going entirely without supper, or adopting the *two meal* system has proved beneficial in obstinate cases where all other means have failed. The frequency and time of eating is a great matter of habit. By constant feeding, one gets himself to crave food five or six times a day, while the system can be satisfactorily nourished upon one meal a day. Brain workers especially, will find great advantage in taxing the alimentary processes less frequently. On deciding to do without supper, at the usual meal time a craving for food can be satisfied by taking a cup of hot water, hot lemonade, or some fruit juice.

Finally, let me urge *thoroughness* and *persistence* in the means laid down to overcome torpid bowels. Do not expect a miracle, but know that by giving proper conditions, normal action will surely be restored, consequently great advantages gained in every direction. Once the functions of the bowels become perfectly normal, all complaints of the system have a fair chance to *cure themselves.*

CHAPTER VI.

DISEASES OF PREGNANCY.

Headache—Neuralgia—Heartburn, etc.

HEADACHE in pregnancy is caused either by uterine irritation, by derangement in digestion, or by both combined.

If caused by uterine irritation, there will be burning pain in the top of the head or at the base of the brain, accompanied by great soreness, which the patient describes as a *sore pain.* This pain, too, is constant, and likely to affect both vision and memory. It usually increases toward evening, and is relieved by lying down.

For this, take warm sitz baths daily, apply hot fomentations to back of the head, and keep in a reclining position as much as possible. (See Chap. XXI.)

SICK HEADACHE is a severe pain in the forehead and through the temples, accompanied by nausea and vomiting, often, too, by coldness of the extremities and great prostration. The attacks are irregular in frequency and duration. The causes are indigestion, biliousness, constipation, fatigue, anxiety, etc.

One under ordinary circumstances *ought to be ashamed to have sick headache.* A little *common sense* in the methods of living will do away with the causes.

TEA-DRINKING as a habit has much to do in pro-

ducing headaches. Tea is stimulating. One ever so weary, after drinking a cup of tea, feels as *good as new*, is invigorated, hopeful, chatty, and entertaining. The social cup of tea! Has it really restored wasted tissues? Is it a genuine nerve feeder? Or does it stimulate native forces to greater action? Is it like a whip to the fagged horse, spurring it on to more toil? Very little tea is appropriated to build up worn-out tissues. It gives false strength. In the reaction headache ensues. It is the penalty that follows over-wrought vitality.

Dr. Gregg's article in the *Homeopathic Quarterly* on tea as a cause of sick headache, is worthy of the attention of those who suffer with this common malady. The doctor alleges that this beverage is the cause of this disease more than all other causes put together, and gives a number of instances where, after leaving off its use, persons who had previously been afflicted were exempt from further attacks. One evidence the doctor gives of the injurious effect of this agent, is the fact that tea-drinkers are liable to have headaches if they omit its use at the regular times of taking it, and that the pain ceases on again resuming the cups.

"This latter, with many other facts contained in the article, has often been observed," says the doctor, "not only on myself but on others, for I had inherited the disease from my mother. It had been the plague of her life as well as my own. We had both been not excessive but regular tea-drinkers; and although she lived to be over eighty years of age, she was never exempt from an attack of greater or less severity, for more than a few weeks at a time, for a period of nearly or quite half a century.

"Knowing this fact, and that from my earliest recollection I had been similarly affected, I was content when the pain returned, to relieve it with the appropriate remedies, with little hope or thought of ever being able to eradicate it. Some twenty years ago I had abandoned the use of coffee and green tea, using only the black and Japan. Pork, pastry, spices, acids and most kinds of raw fruits were sure, if indulged in, to bring on an attack of my old trouble; and this weakness of the stomach seemed to be gradually on the increase, besides a train of nervous symptoms, such as sleeplessness, palpitation of the heart, unsteadiness of the hand when writing, etc., etc., giving me no little annoyance.

"After reading the article referred to, I concluded some three months ago, to use no more tea, substituting in its stead hot water with a little milk. The result for the first week or ten days was much as I had anticipated, being, during the whole of that time, scarcely ever free from headache. At length the pain became lighter and when it did return, was of short duration. My nervous symptoms grew less, palpitation left entirely, my stomach became much stronger. I can now eat with impunity many things which for years had been sure to disagree. The headache now very rarely returns, and never with severity; besides, within the past two months my weight has increased sixteen pounds."

For many years I was subject to sick headaches at irregular intervals. They would come on from a cold, from want of sleep, or under mental strain. When I began to travel and lecture I gave up the use of butter because I could not always get that

which was good. Since that I have never had a severe attack of headache. I have recommended many others to deny themselves of butter and other fats with good results, using honey, fruit juice or milk instead.

With many, potatoes cause sick headaches, especially if mashed with a great deal of butter. They become soggy and cannot be penetrated by the gastric juice. Some think that they should never be eaten at the same meal with acid fruits.

The very *worst sick headaches* can be cured by temperate living. A delicate lady was subject to fearful attacks of sick headache, at least twice a month. They would last from twenty-four to forty-eight hours. Her sufferings were simply terrible. She had dyspepsia, with grave uterine complications. She was liable to die in one of these attacks, and could not get well at home. By my advice she went to a hygienic institute where she could get baths, the best diet and proper attention.

After beginning treatment she never had a *severe* headache. Every attack was warded off, and she returned not only thoroughly cured, but a convert to the belief that *fruits* and *grains* afford the best diet for health and longevity. One has not always the appliances or the determination (for long sickness weakens the will) to carry out a settled and desirable course of treatment at home. In such a case, a well regulated hygienic institute should be sought.

For prevention of attacks the treatment for biliousness and constipation will be effectual. Rubbing, spatting, brushing and combing the head often wards off the pain. Large drafts of hot water, or hot

lemonade, or salt and water may give relief. Put hot applications to the feet and fomentations upon the stomach. Also take a hot enema of three quarts of water and two tablespoons of salt. The latter seldom fails to ward off an attack if taken in time.

The following remedies have proved invaluable:

Cimicifuga, 2*d*.—Sore, aching pain at base of brain, heat in top of head, boring pain in the eyeballs, aching in the limbs, restlessness. Six pellets every hour.

Ignatia, 2*d*.—Pain in forehead, nausea, fainting, depression of spirits. Pain relieved by lying down. Six pellets every two hours.

Sanguinaria, 3*d*.—Sick headache, worse from motion, noise or light, pain in back of head and running upward, dull, heavy pain in stomach. Six pellets every half hour.

Nux Vom., 2*d trit*.—Sick headache with vomiting, pains intermittent, feet cold, congestion, with pale face. Put one grain in six spoons of water, and take a spoonful every half hour.

Puls., 3*d*.—Pain in top of head, sharp pains in back and limbs. Six pellets every hour

Gelseminum, 2*d*.—Pain in right side of head, running down the spine. One feels herself getting blind, pain relieved by tipping head backward, recurs periodically. Six pellets every half hour.

HEARTBURN is acidity of the stomach, dependent upon the quality of food or the power of digestion. Avoid starchy foods, fats and meats. Avoid gravies. I know a lady who always has extreme acidity after partaking of chicken or turkey gravy, while nothing else has a similar effect. To remedy heartburn, take the meals entirely without drinking. The gastric

juice that dissolves the food is not secreted until the liquids have passed from the stomach by absorption. Anything that detones the stomach prevents it having power to perform both of these functions, consequently the food remains, to ferment and sour. If acidity is present, the gastric juice can be stimulated by eating a piece of burnt toast or taking pulverized charcoal. Some, understanding this, make crackers containing charcoal. A few mouthfuls of these after the meal will answer the purpose.

Avoid a variety at one meal. Choose such articles as experience has proved to be best assimilated. Do not take magnesia, lime, soda, or any other alkaline for this trouble. They injure the mucous coat of the stomach, and the difficulty is more likely to recur another day. Drinking copiously of warm water may be resorted to, if the burning is severe. This will cause vomiting and give relief. Abstain from food until the following day, and eat sparingly until the stomach has recovered a healthy tone.

FLATULENCE AND COLIC arise from a failure of intestinal digestion. Many of the vegetables are inclined to cause flatulence: beans, sweet potatoes, and cabbage most frequently. Corn meal, oat meal, and rolled wheat will produce flatulence, if not thoroughly cooked. All of these require more time in preparation than is usually given.

To remedy flatulence drink hot water, take warm water enemas or use the fomenter over the stomach. Observe what articles of food cause the trouble, and avoid them.

HEMORRHOIDS OR PILES are often caused in pregnancy by inflammation of the rectum or pressure of

the gravid uterus. Yet they are many times a local indication of a constitutional disturbance, and local applications can give only temporary relief. The most obstinate cases can be overcome in time by correct living. The diet and exercises should be similar to those for constipation.

Dr. Shew says: "There is nothing in the world that will produce so great relief in piles as fasting. If the attack is severe, live a whole day or even two days, if necessary, upon pure, cold, soft water alone." I would substitute hot water and hot lemonade, followed for several days by liquid foods only. Of these *bran gruel* is the best. When there is internal heat tepid sitz-baths and cold compresses are of great benefit. The latter should also be used for internal inflammation. An enema of hot water relieves the pain incident to hemorrhoids. For recent cases the following recipe will seldom fail to relieve:

℞ Fl. Ex. Hamamelis, ʒij.
Linseed oil, ʒij.

Mix.—Apply externally two or three times a day, or inject with a small syringe.

EXCESSIVE SECRETION OF SALIVA is only another indication of indigestion, and rarely troubles one who lives plainly. Drinking hot water will relieve it. Also holding in the mouth very hot or very cold water, or pieces of ice, will give temporary relief. It rarely fails to disappear under the *fruit diet*. Eating a few almonds or a peach kernel after a meal frequently produces desirable results. Indeed, these are often valuable for indigestion.

GREEDY APPETITE is more to be feared than loss

of appetite. One is hungry at all times, complains she can not get enough to eat. This is strong evidence that there are morbid conditions. The system is likely to take on excess of fat, and become loaded with poisonous elements.

To fight an excessive appetite is the hardest battle of the pregnant woman. If convinced herself that over-eating is injurious, her friends are delighted to see her *enjoy her food*, and furnish everything that pleases her taste, and she eats in season and out of season. She even "gets so hungry she can not sleep," and in the night partakes of a pantry feast. If the best conditions are sought for self and child, this morbid appetite must be overcome.

Observe religiously a few rules:

On no account eat between meals.

Partake mostly of fruits and vegetables.

Keep away from the odor of food.

Take plenty of outdoor exercise.

When a sense of hunger comes on, drink hot water, or hot lemonade. Have a *strong will* to conquer and the victory will be won.

LOSS OF APPETITE is seldom sufficiently persistent to occasion anxiety, unless accompanied by nausea, or constipation. (See Chapter V.) Usually it is nature's method of restoring normal conditions, and if *let alone completely* will right itself. One, however, is so imbued with the fear of not being nourished that she *forces* herself to eat, and hence thwarts nature. *If there is no appetite, eat nothing*, for the food will not be digested. If in following this rule one feels a faintness or a "goneness" at the stomach, drink thin bran gruel hot, or a cup of wheat coffee.

Wait for the next meal—if still there is no appetite, pursue the same course.

LONGINGS.—Many women all through pregnancy seem possessed to fill their systems with the vilest *trash*. They *must have* chalk, slate pencils, magnesia, starch, condiments, etc. Sometimes these longings are from an actual want in the system, then, again, morbid conditions crave what they feed upon. No one lives a sufficiently natural life to depend upon the instinct for food. Without knowing the case it would be hard to say whether the fancy should be gratified. Hundreds, however, can testify, that by adopting the diet laid down in this book, the system is naturally fed, is fully nourished in all the elements, and one seldom suffers from craving demands. If the article desired is known to be injurious, like cloves, pickles, alcoholic stimulants, magnesia, starch, etc., it is better to overcome the desire. The juice of a lemon in hot water, a brisk walk, a ride, or a merry chat with a friend will dissipate the fancy. Put the mind on something above physical desires. Commit a poem, learn a song, paint a picture, make a garment, or do a good, generous deed. If possible, rise above appetite.

DIARRHEA in pregnancy is not of frequent occurrence. It usually is only an effort of nature to correct abnormal conditions, in such cases requiring no attention. If, however, it becomes persistent and troublesome, it will, contrary to common prejudice, usually yield to the use of acidulated drinks or the fruit diet. It may be best for a few days to keep quiet and avoid solid food. Enemas of hot water are frequently beneficial.

The following remedies are indicated:

Arsenicum, 3*d*.—Discharges light and copious with great thirst. Six pellets every four hours.

Merc. Cor., 6*th*.—Frequent urging and straining, severe pain. Discharges slight, greenish, or mixed with mucus. Six pellets four times a day.

The symptoms of pregnancy treated thus far are usually the result of some disturbance in the operations of alimentation. The few remaining to be considered would scarcely ever occur, if the entire system were rightly nourished. Still, not being immediately the result of failure in the digestive act they merit special attention.

NEURALGIA and neuralgic toothache are common and distressing symptoms during gestation. The child of the forest, the peasant girl of Europe and the dusky cotton picker of the South probably have no conception of a neuralgic pain.

Our *cultured* civilization incurs the infraction of so many physical laws that it is difficult to find the cause of any disease. Neuralgia is not unfrequently the constant companion of the bilious, *overfed*, or perhaps, I should say, the carbonaceously fed subject. Too much fuel, and too little oxygen!

Lack of nerve food is another cause. The phosphates and other saline elements are insufficient. Also exhausted and weakened nerves, making an effort to recuperate, give the possessor great suffering. The mother, who already has several children, wearied and worried by their many wants, whose domestic cares are a continual burden, who has no surcease from the sexual relation, is the one likely to suffer from neuralgia. Often the pregnant woman strains

every nerve that her house be put and kept in order. She spends anxious days and sleepless nights in weary watching over a sick child or husband. Suffering must surely follow. The tonics, stimulants and opiates prescribed by most physicians cause worse symptoms than the original trouble. Nature demands only rest. The relief obtained by drugs is at too great a sacrifice of vital force. Nearly all that take opiates attest that on the following day sufferings ensue from nausea, headache, loss of appetite, constipation, etc.

In most cases hot applications will give sure relief. Why is it, that simple measures are the last thought of? Use the fomenter locally; if that is not sufficient, give a full hot or thermal bath. (See Chap. VIII.)

Human magnetism is superior to all other agents for neuralgia. Nearly every family has some member that possesses the gift of healing by the "laying on of hands." The spine and extremities should be manipulated, and then the affected part. The patient will fall into a restful sleep, awaken refreshed, if not cured, and have no poisonous drugs to be eliminated from the system.

Some years ago I was called late at night to a lady who for days had suffered untold agony from facial neuralgia. Her face was greatly swollen and the pain was so intense that she had nearly lost her reason. An eminent physician, under the popular delusion that it was *malaria*, had prescribed quinine. As she had protested against its internal administration, he ordered her bathed in an unction of quinine and cosmoline. Each day finding the patient worse, he increased the frequency of the quinine bath.

Upon my entering the room, she seized my hand with a vise-like grip and cried: "Doctor, give me something, or I must die of this agony!"

I assured her that she should have help. Turning to her husband, I said: "Bring me a wash-bowl with hot water and ammonia in it. Put four bricks in the furnace as soon as you can."

Quickly the whole surface was cleansed of the obstruction to the pores. The heated bricks were wrapped in wet cloths and one placed each side of her face. Friction was applied to the extremities, and in less than half an hour after I entered the house the anxious husband and friends were rejoiced to see the patient enjoying a restful sleep. She made a speedy recovery. There are few cases of neuralgia that can not be relieved by this, or similar means. "Will not the pain return?" Perhaps, but not as likely as where the nervous sensibility has been benumbed with drugs.

If the mother has facial neuralgia or toothache and can not be spared from family cares to take the needful bath and rest, or can not get magnetic treatment, temporary relief can be obtained by bathing the affected part in the tincture of aconite. This is rarely followed by unpleasant results, but should be used cautiously and only externally.

BURNING FEET are best relieved by bathing them in very hot water. A sand bath too, is excellent. Have a box of moist sand, in which bury the feet for thirty or forty minutes. In summer one will find it very grateful to allow the bare feet to come in contact with green grass or freshly turned earth.

CRAMPS in the limbs are occasioned by pressure

upon the crural and sciatic nerves; are frequently the direct result of pressure from clothing. For temporary relief lie flat upon the back, head and shoulders low, and hips elevated. Apply hand friction to the limbs and back. The only permanent relief is to take the exercises that will expand the ribs and walls of the abdomen, thus giving more room for fetal house-keeping.

SWELLING OF THE EXTREMITIES is caused from biliousness and sluggish circulation. Oftentimes the venous circulation is so deficient that *varicose* veins are the result. Sometimes these swell and form knots and tumors of great size. I recall a patient who had a varicose tumor as large as the doubled hand, situated upon the labia. These knotted veins give great distress, and cause much anxiety. I have never known of their annoying a person who had adopted the *fruit diet* and other hygienic measures.

Temporary relief can be obtained by bathing the limbs in cold water, and putting on a roller bandage made of strips of rubber. This should be from an inch and a half to two inches wide. It must be put on smoothly and equably. Begin at the toes, lap the edges about half an inch, make reverses to prevent creases, and extend above the swelled veins.

PAIN IN THE SIDE, either right or left, may be from the same cause as cramps or pains in the limbs. Put on hot fomentations and follow the directions for cramps. These pains may extend to the abdomen, and may be neuralgic in their character, or may assume an intermittent form, producing what is called *false pains.* They often simulate labor pains so closely as to deceive patient and friends. To distin-

guish them, place the hand upon the abdomen during the pain. If contraction of the uterus is felt, there is true labor; but if there is no change in the walls, they are false pains. Frequent warm sitz-baths will give relief.

FOR RIGIDITY OF THE INTEGUMENT of the abdomen, bathe in hot water, then rub in olive oil or cosmoline. This symptom is not likely to be troublesome if there is good muscular development.

INSOMNIA is the result of reflex nervous action from stomach or uterus. The causes must be removed. Bathing feet and legs in cold water, or taking a sitz-bath, temperature 90 degrees, followed by thorough friction, will usually give sound, refreshing sleep. A compress applied to the back of the neck is good, especially if there is heat in the head. Try changing from the customary bed to a lounge or another apartment. Hand magnetism or the magnetic cap will afford relief to many. Tea and coffee often produce wakefulness, and should be omitted.

In place of the evening meal take a cup of hot water or wheat coffee. When all other means are without avail, this abstinence seldom fails to secure sound, refreshing sleep, that is truly "Nature's sweet restorer."

Avoid opiates. Mother and child suffer less from insomnia itself than from the effects of drugs that produce sleep by their anodyne effects. By these the processes of nature are disturbed and all the operations of the body deranged. After going to bed sip slowly a cup of hot water and milk, equal parts. This is especially desirable where there is nervous irritability and weak digestion.

For many years I was subject to insomnia. I found temporary benefit from looking steadily at one object, keeping the eyes wide open. It is better to have the object above and back of the head so that the eye is forced to roll backward and upward. Keep the eyes open as long as possible. When at last they close, still in imagination look at the object, keeping the mind steadily upon it. There is one measure still better than this for insomnia; that is, to become entirely indifferent as to whether you sleep or not. Possess yourself of the belief that sleep is unnecessary for you, that you are as well off without it. Occupy your mind by reciting poetry, recalling the past, or planning work for the future, assuring yourself that your body is getting rest. If you can become entirely convinced of this fact, with no lurking combative belief, you will be surprised to see that you have obtained a condition which will soon result in oblivion.

LEUCORRHEA.—A thin, milky, greenish or watery discharge is not unfrequently a great annoyance in pregnancy, and a drain upon the vitality. It is usually the result of inflammation in the uterus and vagina, or an irritation set up by hardened feces in the rectum. Leucorrhea is not a disease, but is simply the symptom of a disease, as the cough or sputa are symptoms of bronchitis. This is nature's effort to throw off inflammation. She fails in the attempt, and such a condition is produced that the discharge becomes chronic.

Do not use astringents for leucorrhea. They only palliate by drying the secretion for a short time. When the remedy is omitted the discharge returns,

or more grave symptoms appear. The cause should be treated. For many cases good results will follow the use of hot injections of carbolic soap suds. Two hours a day, wear cotton in the vagina saturated with glycerine. This temporarily increases the discharge, but aids to remove irritation. Like other symptoms this yields to thorough hygienic measures.

PRURITIS of the vulva often becomes very troublesome; may be the result of a sanious leucorrhea, excessive dryness, inflammation or eruptions. For the first cause treat accordingly. For inflammation of the labia apply cloths in a cold lotion of borax, one teaspoonful to a quart of water. For dryness apply glycerine upon cotton. Pruritus will usually be relieved by the following lotion:

℞ Tincture Lobelia, " Benzoin, aa ʒij
Glycerine, Alcohol, aa ℥j
Add benzoin last, slowly.

Apply upon absorbent cotton or oakum. Cleanse the parts frequently with carbolic soap suds.

As hygienic treatment of pregnancy is fully given, other symptoms are omitted. Remember that suffering is the result of violated laws. With physical as moral law:

"Each man's life
The outcome of his former living is.
The bygone wrongs bring forth sorrow and woes;
The bygone right breeds bliss,
That which ye sow, ye reap."

CHAPTER VII.

HYGIENE OF PREGNANCY.—DRESS.

What more charming sight than a rosy, robust young woman! Full of vigor, life, strength, power; her step elastic, bounding, her face radiant, her presence magnetic! To such, there are no fears, no forebodings in maternity!

She needs not the counsel of physicians or books. Her own life fulfills the law. It is not for her I write, but for those who, constantly violating physical laws, never know the blessedness of health.

A woman possessed of a good constitution, having had proper physical training, is fully prepared to assume the responsibilities of marriage and maternity. Living according to physiological laws, she needs to make but little change during the period of gestation.

Realizing her obligations to offspring and posterity, long before assuming the marriage relation she will study and practice all known laws of health.

Dr. Holbrook says: "Those ailments to which pregnant women are liable, are, most of them, inconveniences rather than diseases, although they may be aggravated to a degree of real danger. Arising, as they do, from the temporary physical condition of the organism, what they require is, not such medical treatment as may be needed for a true disease, but

rather a general hygienic regimen. For a similar reason, while on the one hand it may not be possible to remove them entirely, yet on the other they can almost always be greatly alleviated.

"In general, however, it may be first observed that such a way of living as *shall maintain and elevate the usual standard of mental and physical health, will of course increase the power of resisting and surmounting all ailments whatever.*"

The aim of this work is to show how this standard may be gained and maintained. The directions given in the following pages are simply teachings of nature. No nostrums or mysterious prescriptions are recommended, but the simple lessons herein given are an effort to teach women how to regain that which they have lost through the errors of civilization.

CONGENIAL SURROUNDINGS for health of both mother and child are essential. Wealth and luxuries are not needful, but comfort and agreeable companionship are desirable, with freedom from excessive physical burdens and mental anxieties.

Men and women are to-day suffering from lack of vitality, caused by the overwork and burdens of our pioneer mothers during gestation. The farmer who would not work his mare in foal, counsels or provides for his pregnant wife no relief from toil and care. The mechanic's wife, knowing the need of making every dollar do its utmost, performs the severest drudgery with only aches, pains and puny offspring for her compensation.

It is true that gestation often gives to woman more than ordinary ambition, which may excel her phys-

ical strength. With usual health and suitable surroundings, she frequently experiences a mental state of exaltation. She expresses herself as feeling "as if she trod upon air." Her whole being drinks from the fountain of life. She is brought *en rapport* with all things divine. She herself is a creator, and is it not divine to create?

In this state of exaltation she is no judge of her physical strength. The prudent, watchful husband and loving friends must be her guardians. She must be held in check and admonished of self-interest and the well-being of her child. Otherwise great injuries are likely to be inflicted upon herself and offspring.

I am acquainted with a charming old lady, whose seventy-eight summers have left her in possession of health and happiness, as a heritage of a well-spent life. In talking of these things, she says:

"Doctor, why is it that my daughters, Jane, Rebecca and Mary Ann, have no powers of endurance? Their father was never sick. My own health and strength have been a marvel to every one. Why! the three girls together cannot do the work I could when I was their age. Girls are no account now-a-days. When I was *like* for my children, I could get up and milk the cows, churn and make cheese. This was not all; I could take the wool from the sheep's back, wash, card, spin, weave and make it into garments. I could walk two miles to church. I slept soundly and ate heartily. Why, what would have become of us, if I had been lying about in wrappers and slippers, dosing with drugs as my girls do now?"

Bless the heart of the dear old lady! Just *because* she did all this, her daughters are not her equals in

strength. She robbed them of their inheritance, by spending all her vitality in exhausting labor, and vicariously they atone for her wrong-doing.

The woman who indulges in the excessive gayety of fashionable life, as well as the overworked woman, deprives her child of vitality. She attends parties in a dress that is unphysiological in warmth, distribution and adjustment, in rooms badly ventilated; partakes of a supper of indigestible compounds, and remains into the "wee, sma' hours," her nervous system taxed to the utmost.

Although faint, weary and exhausted, the following day is spent in receptions and calls, closing with theater or opera. If abortion is not the result, can any sane woman expect her child under such circumstances to be in possession of vigor and strength? Bounding health is the inheritance of childhood. Woe to the parent who robs it of this inheritance!

I was summoned one morning by a Mr. B., a cheery, successful business man, to see his wife.

He says: "Doctor, I have exhausted my skill, and must have advice from higher authority."

"What is your diagnosis?"

"Pregnancy, five months, accompanied by hysteria; unlike herself, she is irritable, fretful and morose; sleeps but little, and has no patience with the children or servants."

This is no unusual case. I found Mrs. B. living in a handsome three-story dwelling elegantly furnished. Every luxury was at her command. She had a delicate, sensitive organization, extremely susceptible to all influences. Her five children were full of spirit, noisy and exacting. A late breakfast caused hurry

and confusion in preparation for school. Upon arriving I found my lady weeping uncontrollably and apparently in great trouble. I took her hand, saying: "My poor child. what is it?"

"Oh, I wish I could get away from myself; life is not worth living."

"None can do that; tell me all, and let us see if your sorrows and ills cannot be alleviated."

The truth was that, although an indulged wife, her burdens were beyond her strength. The Irish cook, good-natured and efficient, had been detected in carrying provisions to a sick friend. The second girl had a beau every night who remained so late that she had insufficient sleep. In consequence she was fretful to the children, and unfitted for all her duties. The youngest child, still a mere baby, was teething and required attention night and day. Though surrounded by every comfort that love could procure, her strength was too greatly taxed. Later in the day her husband called at my office.

He says: "What is *your* diagnosis, doctor?"

"Overtaxed; her nervous system is worn out."

"Why, she has all the help she wants, and needs to do nothing."

"True; but there is no help to be had for the very things that have worn her out. No one can take a mother's place. She has children too fast for her strength. She is a conscientious mother, desiring to give every child proper training. To do this requires that domestic arrangements be systematic and complete. Successful housekeeping, under modern improvements, requires the combined heads of an army general and a secretary of state."

"Well, doctor, what is your prescription?"

"Take her away from it all."

"Where had she better go?"

"To her mother, a hygienic institute, or what is better, can't you get away from business awhile, and go with her yourself? It would do her a world of good. Have a second honeymoon; let her see, hear and do what pleases her best. and, mark my word, you will be well paid."

"I declare! I never thought of matters in that light before. I believe that you are right. I can get away next week, and I will. Mother can come in and take care of the children while we are gone just as well as not."

To parents, I would say with Fowler: "By all the value of splendid children over poor or none, should all other interests be subservient to maternity, not it to them. Brush aside, like cobwebs, pecuniary, ambitional, and all other ends, and make it imperious lord over all. Your family may better live on bread and water, and you have splendid children, than do all this work, and have ill-natured, sickly ones. What are stylish rooms and furniture, many and high-seasoned dishes, in comparison with a sweet and healthful child? . . . Your child-rearing mission is your one duty. Do this in the very best manner possible, but *make all else secondary*. See that the prospective mothers want nothing. They deserve, and, as society advances, will yet receive universal sympathy, along with the utmost care and affection."

On account of the foregoing remarks, do not suppose that an idle, dependent life is counseled. By no means. A woman in pregnancy, as at other times,

should be actively employed, and if it can be in some absorbing, congenial, lucrative work, so much the better. It is the incessant nothings of woman's work which, while accomplishing so little, yet wear out the nerves, and exhaust the patience.

"Labor is life! 'Tis the still water faileth!
Idleness ever despaireth, bewaileth!
Keep the watch round, or the dark rust assaileth;
Flowers droop and die in the stillness of noon.
Labor is glory! The flying cloud lightens:
Only the waving wing changes and brightens,
Idle hearts only the dark future frightens.
Play the sweet keys, wouldst thou keep them in tune."

A lady well known to a large circle of friends as a successful writer and business woman, the mother of a large family of sons and daughters, who, at the age of forty-five is the personification of health and energy, had this remarkable experience: During the period preceding the birth of her fourth child, pecuniary misfortune, and the ill-health of her husband, combined to make it necessary for her to carry on his business. She was obliged to walk nearly two miles every day to his store, where she staid all day absorbingly engaged in the duties of looking after the details of sales, keeping the books, accounts, etc., after which day's work she walked back to her home.

Everybody said Mrs. B. would surely break down, but instead of doing so, she preserved the most vigorous health, and experienced none of the sick and nervous feelings usually incidental to pregnancy. When the child was born, the extraordinary circumstance that its birth was attended with scarcely any pain, led the physician and the lady herself to inquire

what might be the cause of such a happy departure from the usual rule.

No other reason could be assigned than the long, regular walks, and the vigorous state of her bodily health. Taking a hint from these facts, in all her subsequent pregnancies, she adopted the plan of taking a large amount of out-door exercise, and keeping her mind occupied by useful employment, and in every succeeding birth the same happy results were obtained.

That she was engaged in an absorbing and congenial occupation, no doubt had much to do with the fact that maternity to her seemed only one of the incidents of life. She had no time to foster aches and pains. The conviction that, by her business management, the support of the family was maintained during her husband's illness, inspired her with unusual energies and hopes. Could women uplift their *home life*, realizing the noble work they are accomplishing in their every day duties, they would find in them an inspiration which avails much against physical debility.

Let me prophesy that different and improved methods will be devised to accomplish woman's work. The mothers of the future will be less burdened, and at the same time achieve more satisfactory results in the labor performed.

This can be done, and the ideal home preserved. Under the present system, many instances of demoralization in domestic life are in consequence of the mother's inability to fulfill all the requirements of her position. She is the tie that holds the home—the mainspring of home-life. In the prophesied future,

she may not wash all the dishes and bake all the bread, any more than now she does the spinning and weaving; yet the maternal love, life and instinct will build a nest far more adapted to successful rearing of offspring than is done under present conditions.

DRESS.

"Give me a form, give me a face
That lend simplicity and grace;
Robes loosely flowing, hair as free,—
Such sweet neglect more taketh me
Than all the adulteries of art;
They strike mine eyes, but not my heart."

From first to last, the pregnant woman's dress should be physiological and hygienic. Perfect freedom for every physical power must be secured. What does this demand? Emphatically looseness and lightness, as well as sufficient and equable warmth.

See to it that not one article of dress impedes, in the slightest degree, the functions of the body.

One dressing healthfully needs to make but little change for pregnancy. Under all circumstances and at all times, dress should cause no restriction to respiration; no interference with digestion; no obstruction to circulation. In pregnancy, furthermore, there should be no hindrance to the development and elevation of the uterus. To accomplish this, a radical change must be made in the ordinary dress of woman. It is now a complete failure as far as fulfilling any useful requirements, and for decorative purposes every rule of art is violated. Even beauty and elegance are usually sacrificed to fashion, "that

most inexorable tyrant to which the greater part of mankind are willing slaves."

Dr. Trall says, "If he were asked what one agency stands at the very head of morbific influences, in causing frailty and malformation, he should answer *woman's dress.*"

Who will come to the rescue, and save us from garments that cause disease and deterioration? Who but women physicians? In consciousness of the right and integrity of purpose, they must teach and preach, line upon line, precept upon precept, until the daughters of our land worship at the shrine of nature, and not lay down their health and lives as sacrificial offerings to the fickle goddess Fashion!

One can be dressed decently, decorously, harmoniously; yes, even elegantly, and still commit no grave violation against physiological functions. How can this be done? To begin at the foundation; wear only a "common sense" shoe. These are constructed upon anatomical principles, allowing freedom of all the muscles and producing no pressure upon nerves or blood-vessels. The sole is *as wide* as the bottom of the foot, the heel is little if any higher than the sole. The curve and elasticity of the arch and freedom of the toes are insured.

Many women suffer from headache, defects in vision, loss of voice, indigestion, backache, etc., simply from reflex action of the pressure of the shoes upon nerves of the foot. I have seen young girls often relieved of tedious backache, by following simply, and only the prescription of a change to common sense shoes. An elocutionist of fine physical development, weighing at least 170 pounds testified that he could

not command the chest tones of his voice, if his boots caused the slightest compression of his feet. Are not women's nerves as tell-tale in their communications as were those of this stalwart man!

Two bright, intelligent young ladies entered a very crowded South Side car. One, with a scowl of pain and fatigue upon her face, said, "I do wish some gentleman would give me a seat. My feet are just coming off." Her companion answered gaily: "Oh, I don't care to sit down. I can stand as well as any man, and so could you if you wore common sense shoes."

Reader, this is not all you could do "as well as a man" if your feet were your untrammeled servants.

Do you say that these shoes are inelegant and you can not endure them? No sensible person can really suppose that there is anything in itself ugly or even unsightly in the form of a perfect human foot; and yet all attempts to construct shoes upon its model are constantly met with the objection that something extremely inelegant must be the result. It will perhaps be a form to which the eye is not accustomed; but there is no more trite saying than the ordinary nature of fashion in her dealings with our outward appearance, and we all know how anything which has received her sanction is for the time being considered elegant and tasteful, though a few years later it may come to be looked upon as positively ridiculous.

That our eye would soon get used to admiring a different shape may be easily proven by any one who will for a short time wear shoes constructed upon a more correct principle. The prevailing shoes, sug-

gestive of cramped and atrophied toes, soon become positively painful to look upon!" These improved shoes are gradually gaining ground even in the fashionable world. We see them worn by the best dressed ladies on the streets of our cities. They are found in show cases and windows of shoe-dealers who clothe the feet of aristocracy.

If one persists in wearing the customary shoe in pregnancy the feet may swell, and untold discomfort result. Relief is frequently obtained at the expense of the husband's slippers. Let him provide his wife a pair of youth's slippers at least two sizes larger than those she ordinarily wears. This will save his Christmas gift and possibly teach the wife a valuable lesson about common sense shoes.

In the *Union Under Garments*, or combination suits, there is a world of comfort and freedom. Once adopting these garments, properly fitted, no woman will "back-slide" to the old chemise and drawers.

The chemise, as the word indicates, is of Arabic origin. Being made of wash material, its original intent was to protect other clothing from emanations of the body. In its native country it is high necked and long sleeved. Its present uncomfortable style had its origin with Parisian *demi-monde*. It constricts the shoulders, and affords insu ficient warmth to the arms and upper part of the back and chest. The superior portion of the lungs needs even more protection than the lower, especially on the back. The band of the drawers can not be so adjusted that it will not detract from the free use and development of the muscles upon which it presses.

THE UNION UNDER-FLANNELS can be found in

dress reform rooms and in most shops, of every grade —from the imported Scotch to very inferior American. Not being able to procure them, one can herself readily change the ordinary vest and drawers. Rip off the band from the latter, try on both garments and adjust them perfectly. Remove the surplus in the front from the drawers, and in the back from the vest; put them together with a lap seam, leaving the extra fullness of the drawers in the back. In this way a comfortable, satisfactory garment can be produced.

These can be worn winter and summer, if demanded by the needs of the climate, or individual. The *chemiloon* is a union of the chemise and drawers. In the summer this garment can be made of cotton or linen, and worn with or without the union under-flannels. It can be trimmed and embroidered to one's taste. In the winter it should be of flannel or ladies' cloth.

Chemiloon patterns can be obtained of pattern dealers. But don't expect that other people's patterns, or those that you buy will be perfectly adapted to you. It is well to fit a suit from old material first. Be sure that it is sufficiently long in the back. Shortness in the seat is a prevailing fault with patterns for sale. Remedy this by putting a two inch fold in the cloth on the side, where the back of the pattern comes. The sleeves of these chemiloons should be long, especially the flannel for winter.

Remember always that the comfort of these garments depends upon a perfect fit.

A princess waist or combination garment is a waist and skirt combined. This can be made of muslin, drilling or silicia, and trimmed elaborately if desired.

Can be cut from a polonaise or princess dress pattern having it about the length of an ordinary under-skirt. To this put one or two rows of buttons, six each, for the attachment of skirts. With the proposed underwear, few will be needed. If only one is worn, that and the outside skirt should be buttoned to the waist.

Among the many for sale, the Bates Waist is the best on the market. To this one can attach the drawers, making an elegant and satisfactory chemiloon. The Bates Waist is a perfect substitute for corset, chemise and corset cover. This garment is what I have sought for years. It is really a thing of beauty; is equable in warmth, supports the skirts, gives a handsome figure, offers no restriction to circulation, digestion or respiration, and supports the bosom better than any corset.

Clothed in the above garments, with the dress loose enough for the performance of every bodily function, one will feel as if she had really broken chains, or escaped prison bars.

A tall, noble, brilliant, queenly woman had been a great sufferer from disease, drugs, doctors and dress. To regain health, she had with characteristic energy made a complete change in her garments. No one who saw her will forget her electrifying expression of triumph as she exclaimed: "For the first time in my life I am an emancipated woman."

Freedom in dress had given her freedom to breathe, live, think, walk and work. Freedom in dress, with proper physical training, makes it possible, at least, for every young girl to possess the form of a Venus or Minerva.

What is the test of the dress being sufficiently loose? One is, lying flat upon the back, and with the hips slightly elevated, to be able to take a full, deep and and prolonged respiration without hindrance. Another is to hold a book between the tips of the middle fingers, raise the arms *perfectly perpendicular* and parallel to the sides of the head, inflate the lungs, and promenade the room. If this can be done easily, the dress offers no restraint for any movement of the body.

By the ordinary dress, even if there is not actually tight lacing, simply a *snug fit*, we get alterations in the shape and positions of the organs. "When it is considered that the organs compressed are those by which the important functions of respiration, circulation and digestion are carried on, as well as those essential to the proper development and healthy growth of future generations, it is no wonder that people suffer who have brought themselves under such conditions."

For the pregnant woman especial pains should be taken that the outside dress be of light material and devoid of surplus trimming. A princess or Mother Hubbard wrapper is preferable. By these the number of bands is reduced, the weight thrown upon the shoulders, and the back and abdomen relieved from pressure. In the true woman, any morbid sensibility in regard to appearance will be lost sight of in the great good gained for herself and child by having a healthful dress.

Hark! I hear a distant murmur of questions. From many, these reach my ear: Are the garments you describe all a lady is to wear? Does she not

need a corset? What if one cannot hold herself up without a corset? Will she wear a corset under or over the princess waist? Does a loose corset do any harm? Wouldn't you recommend Madame Foy's corset? Won't she be benefited by a health (?) corset? What about health reform corsets? And faster and faster the questions come until my ears are deafened with corset! corset! corset!

If women had *common sense* instead of *fashion sense*, the corset would not exist. There are not words in the English language to express my convictions upon this subject. The corset, more than any other one thing, is responsible for woman's being the victim of disease and doctors.

That part of the body around which we place corset and bands has no bony structure for its protection. This very pliability renders it possible for one to unconsciously yet easily produce a deformity in a few weeks.

Who can begin to prophesy the untold and manifold sufferings for which a factory full of corsets must be responsible? And where is the end? If the wearer only had to pay the penalty with pain and weakness, we might hold our peace.

One-half of the children born in this country die before they are five years of age. Who can tell how much this state of things is due to the enervation of maternal life forces by this one instrument of torture?

I am a temperance woman. No one can realize more than I the devastation and ruin alcohol in its many tempting forms has brought to the human family. Still I solemnly believe that in weakness and

deterioration of health, the corset has more to answer for than intoxicating drinks.

What affects the physical affects the spiritual; what affects the animal life affects the mental. Given a physical body dwarfed and deteriorated in any respect, and a corresponding deficiency in spiritual, intellectual and moral worth is likely to exist. Look at our men and women who have been grand and successful in achievement, noble in purpose, and vigorous in intellect. With few exceptions they are men and women of harmonious, strong, athletic physiques. Women cannot possibly attain to this condition under the restricting influence of boned and steeled garments.

"What possible harm can a corset do if worn loose?" My friend, put a band quilted full of cords and bones upon the arm of your active boy, whose athletic feats are your pride; let him wear it ever so loosely, and witness the deteriorating effect upon his biceps and triceps muscles! Put a similar bandage upon your pet cat or dog, just as loosely as can be retained, and watch the result upon respiration, digestion and circulation! Mark my word, in less than a month it will take more than pepsin to make the food of that animal digest, or magnetic insoles to keep its feet warm.

At the close of one of my medical conversations a bright, intelligent young married woman took me aside and asked me very confidentially, how far advanced a woman should be in pregnancy before she laid aside the corset. I had for several days repeated and reiterated in strongest terms my convictions that it was always to be deprecated and never tolerated.

Consequently, I was greatly astonished at the question. I replied: "Is it possible that with all these illustrations and all this strong language I have not made myself plain? Have I talked in vain? Then loud enough for the group standing about to hear, I said, "The *corset should not be worn for two hundred years before pregnancy takes place.* Ladies, it will take that time at least to overcome the ill effects of this garment which you think so essential!

Abandoning the corset *entirely* and adopting a physiological dress, aside from lessening suffering in pregnancy, goes very far toward alleviating, yes, even *curing* many of the diseases peculiar to women.

Hundreds of ladies have testified that after trying in vain the most skillful physicians, they have been forced to look into the cause of their troubles for themselves. Once a woman begins to *think* outside of Fashion's dictum, she surely thinks herself out of the *bars* of dress. Once free, her road to recovery is made clear. With other common sense rules of living, health becomes restored and precious life saved.

Many girls long unfitted for work have obtained health and strength simply by a change in dress. In an Iowa college, the professor of natural history, a petite lady, became very enthusiastic upon examining some dress reform goods, and gave quite a lecture to the students upon their advantages. She said that in her school days and first years of teaching she could not walk over three blocks without fatigue and actual pain. When her day's work was done she was compelled to lie down, being unable to see friends or do extra work. Four years previously, however, she had adopted "common sense" shoes, the reform

underwear, also a skirt supported by a waist, and the dress itself made loose and light, as well as short enough to clear the mud in walking. By this change in her habits she had become able to walk miles in her search for specimens, and knew nothing of weariness or the necessity of rest, save the regular hours of sleep. This is not an exaggerated case, and thousands of delicate, tired, useless girls can become strong and useful, if they will "go and do likewise."

Prof. N. H. Flower closes his admirable work upon "Fashion in Deformity" with these valuable thoughts: "The true form of the human body is familiar to us from classic models. It is, however, quite possible that some of us may think the present fashionable shape the more beautiful of the two. In that case it would be well to consider whether we are sure our judgment is sound on this subject. Let us remember that to the Australian, the nose-peg is an admired ornament, that to the Thlinkeet the Botocudos and Congo negro, the lip dragged down by a heavy plug, and the ears distended by huge disks of wood, are things of beauty; that the Malay prefers teeth that are black. Let us carefully ask ourselves whether we are sure that in leaving nature as a standard of the beautiful, and adopting a purely conventional one, we are not falling into an error exactly similar to that of all these people whose tastes we are so ready to condemn. The fact is, that in admiring such distorted forms as the constricted waist and pointed foot, we are opposing our judgment to the Maker of our bodies, we are neglecting the criterion offered by nature; we are simply putting ourselves on the level in point of taste with those Australians, Botocudos,

and negroes. We are taking fashion, and nothing better, higher or truer for our guide, and may we not well ask with Shakespeare: "Seest thou not what a deformed thief this Fashion is?"

Prof. O. S. Fowler, ever a staunch and fearless advocate for health and temperance, only emphasizes what all sensible persons must believe:

"*Tight lacing* is the chief cause of infantile mortality. That it inflicts the very worst forms of physical ruin on woman and offspring is self-evident. No evil equals that of curtailing this maternal supply of breath; nor does anything do this as effectually as tight lacing. If it were merely a female folly, or if its ravages were confined to its perpetrators, it might be allowed to pass unrebuked; but it strikes a *deadly blow* at the very life of the race. By girting in the lungs, stomach, heart, diaphragm, etc., it cripples every one of the life-manufacturing functions, impairs the circulation, prevents muscular action, and lays siege to the child-bearing citadel itself. By the value of abundant maternal vitality, air, exercise and digestion, is this practice murderous to both. It often destroys germinal life before or soon after birth, by most effectually cramping, inflaming and weakening the vital apparatus and stopping the flow of life at its fountain-head. It slowly but surely takes the lives of tens of thousands, and so effectually weakens and diseases as ultimately to cause the untimely death of millions more. No tongue can tell, no finite mind conceive the misery it has produced, nor the number of deaths directly or indirectly of young women, bearing mothers, and weakly infants it has occasioned; besides the millions on millions it has caused

to drag out a short but wretched existence. If this murderous practice continues another generation, it will bury all the middle and upper classes of women and children and leave propagation to the coarse-grained but healthy, lower classes. Most alarmingly has it already deteriorated our very race in physical strength, power and constitution, energy and talents. Let those who had rather bury than raise their children, marry tight lacers.

"Moralists, Christians, reformers, philosophers and philanthropists of all sects and grades, come, let us unite in presenting a frowning front to this race-ruining practice, and bachelors insist on *natural waists or no wives*, and frown down a practice your patronage imposes! Woman will cease to lace just when you cease to require it."

CHAPTER VIII.

HYGIENE IN PREGNANCY—BATHING.

FREQUENT BATHING in pregnancy is of the greatest importance. When the "water cure" fever first ran like wild-fire through this country, many were alarmed lest the child-bearing woman should do herself great harm. Although the *cold* water washing was carried to great excess, few cases came to light where any one was injured by it; while hundreds bear testimony that they were greatly benefited. Relief was obtained for the suffering both during pregnancy and at confinement. One step at least was taken in advance which never can be retraced. Previous to that time women were actually afraid of water. It might be well for others, but tradition and prejudice taught that if a pregnant woman bathed in cold water she ran great risk, and if her hands even were put in cold water after confinement *she would surely die.*

The "water cure" people took the other extreme. The woman doused and swam the whole nine months, and fifteen minutes after her child was born, she would be lifted into a full or sitz-bath of cold water. The doctor and the good grandmother could not account for the fact that she survived, save by attributing it to some special providence. Forty years only have worked wondrous changes, and now all

intelligent women know the luxury of the bath in this condition, and many recognize its therapeutic value.

The processes of nutrition and waste are more active in the pregnant woman than in any other. Her condition is more like that of a child, consequently she can bathe more frequently with advantage.

THE SPONGE OR TOWEL BATH, taken in the morning two or three times a week, is stimulating and invigorating. No more than two minutes is required for this bath. It should be taken immediately upon rising, while the temperature of the body is warm enough to insure thorough reaction. The colder one can use the water, the more sure the reaction. The first few mornings bathe the upper part of the body only. In a short time one can venture upon the whole surface. It should be followed by friction with a Turkish towel or coarse mitten, and if the person is not strong, with rubbing by an assistant. Then for five minutes take deep inspirations of fresh air, and the people are few who do not *feel good* after this ablution. It is par excellence the "ounce of preventive." It is a "coat of mail" against colds, catarrhs and influenzas. To the pregnant woman it is life and vitality, and atones for a multitude of physical sins.

A man once wrote that, "by wearing magnetic appliances ozone was developed in the blood." Whether he knew what ozone was, or what condition the blood was in when ozone was in it, is not proven. If, however, it is possible to get a condition in which you feel that there is "ozone in the blood,"

it is after one of these quick, cold, tonic, invigorating baths. My experience in prescribing it has proven that even diurnal frequency is not debilitating. Too many warm baths may, in time, reduce the physical standard. But simply wetting the surface, with hand, sponge or towel in cold water, or, what some prefer, dashing cold water quickly over the body, is a decided tonic. A little courage and perseverance is required to form the habit—once formed, few relinquish it. If no reaction follows and the person remains cold, it should not be persevered in.

THE SITZ-BATH is one of the most desirable baths for the pregnant woman. A tin tub made especially for this bath, requiring but little water, ought to be in every household. If unable to procure one, a small-sized wash-tub can be used, raising one side on a block of wood. Tepid water is the most beneficial, unless for the relief of pain or acute inflammation, when hot water should be used. Commence taking it with the temperature at 90° Fahrenheit, and gradually decrease it, until during the last months it is as low as 60°. Remain in it from three to eight minutes, then have towel and hand friction, followed by rest in the reclining position, and sleep if possible. If it causes "a rush of blood" to the head, remain in for a less time, and put a wet napkin around the neck.

From ten to twelve o'clock in the morning is the best time to take this bath. If one has not time to rest at this hour, it can be taken just before retiring. Without the rest half the value is lost. This bath is a tonic, sedative, alterative, laxative, diuretic, anti-spasmodic, anti-periodic, anti-phlogistic, etc.; indeed

it will do almost anything desired to be done for the pregnant woman. It restores nervous equilibrium, it removes obstructions from the surface, is invaluable for portal congestion, and for inflammation of any of the abdominal or pelvic viscera. Nothing is better for insomnia, facial neuralgia, nausea, biliousness, constipation, hemorrhoids, cramps, varicose veins, weariness, head-ache, nervousness, etc., etc.

A woman has omitted the most effectual remedial agent for pathological symptoms, if she has not tried this bath; and not once only, but has taken it every day, or twice a day, for at least a month. She may have taken any amount of remedies, may have used outside appliances, but if she has not had this tepid sitz-bath she has omitted the *very best* and surest means of relief. It cannot do harm, and it *can do great good.*

For severe pain from colic, neuralgia or acute inflammation, the bath should be taken warm, and in some instances, quite hot; this should be continued fifteen or twenty minutes, protecting the patient carefully with blankets, after which she should, without removing them, lie on the bed and rest.

HOT FOMENTATIONS are usually administered by applying to the affected part a flannel cloth wrung out of simple or medicated hot water. Some physicians prescribe bags of hops, tansy, smart-weed, etc., or Indian meal or flaxseed poultice, to be kept hot in a steamer. All these appliances are remonstrated against by patients and nurses. They are disagreeable and untidy. The bed gets wet and soiled, the patient likewise. Moist heat is wanted, but one is more likely to get moist cold, which has a dampen-

ing effect upon both body and mind. The nurse scalds her hands, ruins clothing, and execrates the doctor who prescribed them.

The very best method of making hot applications is by means of the rubber "hot water bottle." These hold from one to four quarts, and can be readily procured. Boiling water can be used in them, and the heat will be retained many hours. They are soft, pliable and agreeable to the touch, and adjust themselves to every part of the body. When moisture is desired, place a wet cloth under them. *No well regulated family should be without a hot water bottle.*"

When, however, this is lacking there are several convenient modes of making hot applications. Put part of a sheet or blanket around the patient, to protect the bed and clothing. Then lay a newspaper upon a cook stove, or flat top of a heating stove. Wring a large flannel cloth, dry as possible, out of cold or tepid water. Lay it between the folds of the paper, and it will soon steam hotter than can be handled. Take it to the patient and place it underneath the sheet, in contact with the body. Have another cloth heating, to take the place of this one when it ceases to be hot. The virtue of a fomentation is in the heat, and it must not be allowed to cool.

Another still more simple method, desirable where the patient must wait upon herself, is to place over the part affected a cloth wrung from warm water; then lay over it a hot stove lid, wrapped securely in paper. This will retain heat for a long time and gives the patient opportunity for rest.

THE HOT FOMENTATION is a valuable remedial agent. It is rare to find acute suffering, where it is

not indicated. It alleviates neuralgia and rheumatic pain. It is good for biliousness, constipation and torpid liver. It relieves colic and flatulence, and is of special value in menstrual pain or suppression. Thoroughly applied in the incipient stages of acute enteritis, gastritis, cystitis, etc., the disease may be arrested, and the doctor cheated of his visit.

The precautions that must be taken in using hot fomentations, especially if moist, is to have them hot and keep them hot while they are continued. When removed, replace them with dry flannel or bathe the part in tepid water, rub dry and put on the ordinary clothing. The latter is desirable when used in chronic affections. In acute attacks, especially of inflammation, it is well to follow or alternate with a compress from cold water. Don't use paregoric, Dover's powders, morphine or even a homeopathic preparation until you have tried thoroughly the hot fomentation. Remember that when you get relief from an application like this, you will not suffer from the poisonous effects of drugs. You rally more quickly, and are not as liable to another attack, for nature has had a better opportunity to throw off diseased conditions.

THE COLD COMPRESS is a convenient, safe, desirable and effectual domestic remedy. Like the fomentation, it requires knowledge and skill in its application, or else more harm than good may result. Take a worn linen napkin or towel, wring dry from *cold* water, apply to the affected part, then cover well with several thicknesses of flannel, securely excluding the air. Reaction soon follows, warmth ensues and the same or better result is obtained than from a poultice. It can remain on one, two or three hours

or else all night. Should always be followed with thorough bathing in cold water and friction.

This compress must not be wet in warm water. In that case it *grows cold and keeps cold.* If wet in cold water, the colder the better, it sends the blood from the surface and the *reaction causes it to get warm and keep warm.* To make it subserve its purpose these three rules must be observed.

1. Wring from cold water.
2. Wring dry.
3. Cover thoroughly with flannel.

The compress should never be continued where warmth and reaction can not be obtained. In persons with a cold surface and a sluggish circulation, it is well to precede it for half an hour with a hot fomentation.

The compress is beneficial both for acute and chronic inflammations. In sore throats, croup, bronchitis and inflammation of the lungs it is invaluable. Many persons use no other means for croup, wringing the cloth from ice cold water. In inflammation of the abdominal and pelvic viscera it is equally good. In pregnancy, if there is irritation in the stomach, congestion of the liver, constipation or distress of the bowels accompanied by heat, the compress in these regions will be beneficial.

The heat and dull aching pain in the back, that is so often complained of, is the result of some irritation in the uterus. The compress worn at night, or when taking the daily rest, will give great relief. It can simply be put across the back, or may extend entirely around the abdomen. The frequency and length of time continued must depend upon the case.

THE FOOT AND LEG BATHS are good derivative appliances. Taken warm they will relieve nervousness, sleeplessness and irritability.

For habitual cold feet there is no better remedy than bathing the feet in cold water at bed-time. Have everything ready for retiring. In the foot tub put three-fourths of an inch of cold water. Hold the feet in that half a minute. Then dry with coarse towel and spat them well with the hand or muscle-beater. The reaction gives warm feet for the night, and if persisted in for three or four weeks, habitual cold feet are often cured.

THE TURKISH OR THERMAL BATH affords one of the best, surest and safest sanative and therapeutic agents known to medical science. In a well-appointed establishment for this bath, the subject enters a room heated from 130 deg. to 160 deg. Fahrenheit; remains there until copious perspiration is induced. He is then taken to a room, temperature about 90 deg., where he is laid upon a slab or table and thoroughly shampooed with soap and water. This is followed by a spray, douche, shower or plunge bath; then he is dried and thoroughly manipulated by an attendant, after which he lies upon a couch from half to one hour to cool and rest. This bath is an expensive luxury, and not within the reach of rich or poor in any but our larger towns and cities.

A TURKISH OR THERMAL BATH AT HOME, with a simple and inexpensive apparatus, has equal value as a hygienic or therapeutic agent. Any woman with ordinary *common* or *nurse sense* can give these baths satisfactorily by observing the following directions:

Take a chair with a wooden seat, an armed office

chair preferable, place in it a piece of flannel blanket so folded that it will fall down in front; under the chair put a coffee cup one-third filled with alcohol. If any other vessel is used be sure the opening is no larger than a cup, as this gives sufficient surface for the combustion of the amount of alcohol; have a foot tub in front of the chair with warm water for the feet.

The patient is seated in nature's raiments only, or as Mark Twain says, "in her complexion," enveloped closely in woolen blankets. One of these is put over her in front and the other at the back, outside of the chair. After she is seated and covered, light the alcohol with a taper. Don't risk burning yourself by using a match. The subject will begin to perspire in from three to five minutes. If blood rushes to her head, giving a red face and feeling of fullness in the brain, put a napkin round the neck, wrung from tepid water. This is better than wetting the head, and it has the advantage of not taking the "crimp" out of her hair.

If she is faint or sick at the stomach, as one may be with the first bath, or if very *bilious*, let her drink copiously of hot water or very weak ginger tea. If the perspiration is slow in starting, or if the heat is excessive, the surface may be bathed with a sponge dipped in cold water. Let her remain fifteen to twenty minutes or longer if necessary, to induce copious perspiration. She can then be bathed and rubbed sitting in the chair. If weak, or longer perspiration is desired, let her lie upon bed or couch enveloped in the blankets, where she can be bathed under cover if necessary. Let the manipulation be thorough. Squeeze, press and pinch every muscle in

the body and spat the surface with the muscle-beater or the ends of the fingers, having the wrist free. Using the entire arm and palm of the hand makes hard work, and does not give good results. If the attendant is magnetic the fingers cause tingling, like hundreds of needles. Let her lie for an hour to rest, cool and sleep.

How readily and easily this luxury and remedial agent can be carried into every home! The apparatus required is simply a wooden-seated chair, two and a fraction woolen blankets, an old cup, a foot tub and five cents worth of alcohol.

This bath should be taken at least two hours after eating. If taken sooner it is nearly impossible to induce perspiration, besides interfering with digestion. For invalids, the preferable time is about ten or eleven in the forenoon. The business man or woman can take it upon rising in the morning or just before retiring. If necessary, one can go out immediately after the bath. There is no *danger of taking cold* if one is bathed in cold or tepid water, and has thorough *massage*.

As a *sanative measure* the *Thermal bath* can be taken at least once a week; for diseases, the frequency depends upon the case.

It is not weakening. Invalids, unable to sit up, gain strength with the daily use of this bath. In the first renovating process that is induced, one may have a *sense* of weakness or faintness, similar to the effects of medicine that rouses up the vital functions, but the cases are rare that this does not pass off in a few hours, leaving a corresponding gain. *The Thermal* bath is valuable in health and disease.

1. It cleanses and promotes the healthy action of the skin as no other bath can do, thus relieving the other excretory organs.

2. It equalizes the circulation of the blood, and removes all local congestions of any and every part, which is one of the most important things to be accomplished in the treatment of diseased conditions.

3. It is the quickest, easiest and most effectual means known to man for purifying the blood. It literally washes the blood of its impurities. The patient drinks pure water, it is absorbed, passes into and mingles with the blood, by which it is carried to the capillary net-work of the skin and poured upon the surface in the form of perspiration; not pure as when it was taken into the stomach, but mingled with the impurities of the blood. If this were its only use, the Thermal bath would be invaluable.

4. It soothes and tranquilizes the nervous system, sweeps the cobwebs of care from the brain, leaving it clear and refreshed.

The Thermal bath is *specially* useful in the treatment of all diseases arising from impurity of the blood, inactivity of the skin, local inflammations, or unbalanced nervous action. It is invaluable for Drug Poisoning, Scrofula, Consumption, Diseases of the Skin, Dropsy, Remittent and Intermittent Fevers, Coughs, Colds, Catarrh, Croup, Gout, Rheumatism, Neuralgia, Diseases of the Liver and Kidneys, Bronchitis, Chronic Diarrhea, etc.

THE THERMAL BATH will break up a cold in its first stages, and at any time will give certain alleviation. For ague it should be taken about the time the chill is anticipated, and given thoroughly. The

cases are rare that will resist the third or fourth bath, using no other means.

In chronic rheumatism it has no equal in therapeutics. For this it can be taken every day. Some have taken it twice a day with benefit. Cases long resisting all other methods of treatment have been entirely cured by this bath.

Most eruptive diseases are helped by it. A lady had salt-rheum all over her body. A ten-cent piece could not be laid on a spot free from eruption. She took these baths *daily* for three months, without any other remedy, and cured herself. She gained in strength, flesh and appetite, and, besides, found herself freed from many minor ailments.

The Thermal bath is valuable in pregnancy, when there is dryness of the skin, coldness of the surface, with sensitiveness to cold. If the pregnant woman has any of the diseases mentioned above, she will find this bath just as efficacious as if she was not *enciente*. She should have a good, skillful attendant, and take ample time to rest after it. Do not fear disastrous results. Ladies have taken them once or twice a week during the entire pregnancy with benefit. The following testimonials only emphasize what has been written.

They purify and invigorate.—*D. Wark, M. D.*

Unsurpassed, as combining luxury and utility.—*R. M. Lackey, M. D.*

The Turks have always considered the public baths of Constantinople as supplying the place of a certain number of hospitals, which would otherwise have to be built.—*Dr. Haughton.*

Ladies, note this: The use of the Turkish bath

renders the complexion more delicate and brilliant—the eye becomes clearer and brighter—the whole person is rendered fragrant, and all personal charms are enhanced.—*Dr. Barter.*

After a day of labor and care, which had quite exhausted me, I have just taken one of the Turkish baths, and come out feeling as completely rested as when I arose from my bed in the morning—in short, as good as new.—*L. H. Thomas, M. D.*

The only sure cure for a cold is the Turkish bath. It opens the pores and starts the system afresh into working order. I cheerfully recommend it, even to persons in good health, as the best means to keep the secretions healthy.—*Dr. D. F. Clinton.*

Rely upon it, it is the *ne plus ultra* of baths.—*Dr. J. E. Westervelt.*

CHAPTER IX.

HYGIENE IN PREGNANCY — DIET.

PROPER FOOD in pregnancy is not more necessary for health and strength of the mother, than for giving normal development to the child. If the food does not afford suitable nourishment, or is not properly assimilated, pathological conditions inevitably result. Besides, few have learned that the *kind* of nutriment taken has much to do with the ease or severity of labor.

The food of the pregnant woman should consist of articles that are nutritious, but not stimulating or heating to the blood. It should be eaten at regular intervals and under favorable conditions.

An important matter is to avoid fluids while eating. Liquid, taken into the stomach, must be removed by absorbents before the gastric fluid can be secreted to dissolve the food and convert it into chyle. A strong, healthy stomach may perform both processes easily. One weakened by dyspepsia or the reflex action in pregnancy may not be able to accomplish this double duty; consequently very much is gained by taking the food dry. Drink, if there is thirst, half an hour before a meal, and not within three hours after. Eat less salt and there will be less thirst.

Avoid all condiments and for the most part *fats* and *sweets*. The two latter are pure carbon, therefore

cause and increase febrile conditions. Sufficient carbon can be obtained in the farinaceous food. Lean meats, the very best beef, mutton boiled, roasted or smothered, cooked quickly and rare, and wild game may be eaten by some without injury. But owing to their stimulating elements, and their effects upon the formation of character, parents desiring to give the world the best reproduction of themselves will avoid the use of animal food.

A woman has for her diet a choice from all the grains, all the vegetables and all the fruits. When a working animal thrives and retains its strength upon two articles only, viz., corn and straw or oats and hay, can not the human make a bill of fare of sufficient variety to please the most fastidious, out of all the grains, fruits and vegetables? If foods were ordinarily chosen, to supply the *needs* of wasted tissues rather than to pander to perverted and capricious appetites, there would be less necessity of a special diet for pregnancy.

Physiologists have within a few years advanced the theory that if a pregnant woman avoids food rich in elements that nourish and develop bone, labor would be comparatively easy and painless. This theory was first made known in a small pamphlet published in England in 1841. It was written by Mr. Rowbotham, a practical chemist of London. His wife had been such a sufferer in two confinements that he had reason to fear she would not survive the third. The work gives an account of an experiment which met with such favorable results that he felt it his duty to publish it for the benefit of others. His theory was that "in proportion as a

woman subsists during pregnancy upon aliment that is free from earthy and bony matter, will she avoid pain and danger in delivery; hence the more ripe fruit, acid fruit in particular, and the less of other kinds of food, but particularly of bread or pastry of any kind, is consumed, the less will be the danger and suffering in childbirth.

"The subject of this experiment had, within three years, given birth to two children; and not only suffered extremely in the parturition, but for two or three months previous to delivery her general health was very indifferent, her lower extremities exceedingly swelled and painful; the veins so full and prominent as to be almost bursting; in fact to prevent such a catastrophe, bandages had to be applied; and for the last few weeks of gestation, her size and weight were such as to prevent her attending to her usual duties. She had on this occasion, two years and a half after her last delivery, advanced *full seven months* in pregnancy before she commenced the experiment at her husband's earnest instance; her legs and feet were, as before, considerably swelled; the veins distended and knotty, and her health diminishing.

"She began the experiment in the first week of January, 1841. She commenced by eating an apple and an orange the first thing in the morning, and again at night. This was continued for about four days, when she took just before breakfast, in addition to the apple and orange, the juice of a lemon mixed with sugar, and at breakfast two or three roasted apples, taking a very small quantity of her usual food, viz., wheaten bread and butter. During the fore-

noon she took an orange or two, and an apple. For dinner took fish or flesh in a small quantity, and potatoes, greens and apples, the apples sometimes peeled and cut into pieces; sometimes boiled whole with the potatoes; sometimes roasted before the fire and afterward mixed with sugar. In the afternoon she sucked an orange or ate an apple or some grapes, and always took some lemon-juice mixed with sugar or treacle.

"At first the fruits acted strongly on the stomach and intestines, but this soon ceased, and she could take several lemons without inconvenience. For supper she again had roasted apples or a few oranges, and rice or sago boiled in milk; sometimes the apples peeled and cored, were boiled along with the rice or sago. On several occasions she took for supper apples and raisins, or figs with an orange cut among them, and sometimes all stewed together. Two or three times a week she took a teaspoonful of a mixture made of the juice of two oranges, one lemon, half a pound of grapes, and a quarter of a pound of sugar or treacle. The sugar or treacle served mainly to cover the taste of the acids, but all saccharine matter is very nutritious. The object in giving the acids was to dissolve as much as possible the earthy or bony matter which she had taken with her food in the first seven months of her pregnancy.

"She continued this course for six weeks, when to her *surprise and satisfaction, the swelled and prominent state of the veins*, which existed before she began, had *entirely subsided;* her legs and feet, which were also swelled considerably, had returned to their former state; and she became so light and active she could

run up and down a flight of twenty stairs, with more ease than before she was pregnant. Her health became unwontedly excellent, and scarcely an ache or a pain affected her up to the night of her delivery. Even her breasts, which, at the time she commenced the experiment, as well as during her former pregnancies, were sore and tender, became entirely free from pain, and remained in the very best condition after her delivery and during her nursing."

It is evident Mr. Rowbotham obtained more than he anticipated for his wife. He had only expected to arrest or decrease the development of bone, but by eating so largely of acid fruits, the inflammatory or "bilious" condition was overcome. The oxygen of the acids united with the excess of carbon previously taken, thus relieved the pathological symptoms under which she was suffering. It is doubtful whether the final favorable result would have been attained had this not been the case, as prolonged suffering often accompanies a premature labor, even when there is little osseous development. The fact that Mrs. R.'s general health was so much improved adds to the interest and importance of the experiment.

He continues: "At nine o'clock A. M., after having cleaned her apartments, she was in the yard shaking a carpet, which she did with as much ease as any one else could have done. At half-past ten she said she believed her 'time was come,' and the accoucheur was sent for. At one o'clock the child was born, and the surgeon had left the room. He knew nothing of the experiment being made, but on being asked on paper by the husband two days afterward if he could pronounce it as safe and as easy a delivery as

he generally met with,' he replied on paper: 'I hereby testify that I attended Mrs. Rowbotham on the 3d inst., and that she had a safe labor and more easy than I generally meet with.' On his asking the midwife if she thought it as easy as usual, she replied: 'Why, I should say that a more easy labor I never witnessed—I never saw such a thing, and I have been at a great many labors in my time!'

"The child, a boy, was finely proportioned and exceedingly soft, his *bones resembling gristle.* He became of large size and very graceful, athletic and strong as he grew up. The diet of his mother was immediately changed, and she ate bread and milk and all articles of food in which phosphate of lime is to be found, and which had been left out before. She also got up from her confinement immediately and well. After her previous delivery, July, 1838, full ten days elapsed before she could leave her bed, and then she swooned at the first attempt; on this occasion, March, 1841, she left her bed the fourth day, and not only washed, but partly dressed herself. Had she not been influenced by custom and also been somewhat timid, she might have done so sooner. To be assisted appeared like a burlesque to her, not to say annoyance. She had no assistance from medicine.

"During former pregnancies, she had subsisted very much on bread, puddings, pies, and all kinds of pastry, having an idea that solid food of this kind was necessary to support the fetus. Nutritious food can be had without that hard and bony element, which is so large an ingredient of wheaten flour. Sago, tapioca, rice, etc., have little of it."

This is a remarkable case, indeed, in some respects seems almost incredible. The theory expounded certainly deserves consideration. If there is any reasonable method by which the throes of parturition can be mitigated, women want to and ought to know it.

I have tested this theory thoroughly, and know many physicians who have instructed their patients accordingly. For a number of years I have been teaching it to women in *conversations*, and have many testimonials of good results. One commencing to practice this method at the beginning of pregnancy need not eat so plentifully of the fruit as did Mrs. R.

A woman who, all her life, has violated natural laws, and consequently has been an invalid, is diseased by deleterious diet and deformed by unnatural modes of dress, can not expect to have a perfectly painless labor. Even such can, however, do much to mitigate her suffering by fidelity to these teachings. Like Mrs. R., comfort, health, strength and vivacity can be obtained during pregnancy, and the *agony* of parturition, that usually continues from twenty-four to forty-eight hours, can be reduced both in duration and violence. The consequence will be a speedy restoration of the organs to a normal condition.

For further proof of this theory the reader's attention is called to the following notable experience: A Mrs. W., the wife of a prominent judge, in the northern part of Michigan, is a woman of fine physique and apparently robust health. She is the mother of four children. With the first three, she suffered prolonged and agonizing labor, lasting in the expulsive stage from thirty to fifty hours. Be-

coming pregnant again, her heart was filled with terror lest she should not survive the ordeal. She was four months advanced in pregnancy when she became acquainted with the "fruit diet" theory, and lived accordingly, subsisting almost entirely upon fruits, rice and vegetables.

Her health became unusually good. The pains, aches and discomforts she had experienced during the last months of previous pregnancies were entirely wanting. The time of delivery had arrived. At five o'clock in the morning she was suddenly awakened with a severe cramp in her limbs. She arose and walked the floor without relief. Returning to the bed, she obtained ease by applications of warmth and friction.

She fell into a quiet sleep, which lasted perhaps half an hour. From this she was awakened by a labor pain. The doctor was hastily summoned, and although he lived across the street and came at once, the child was born before his arrival. This occurred before seven o'clock, less than two hours from the time she was awakened with the cramps. She avers that the effort that expelled the child could not be called a pain, only a sense of discomfort, or of continued pressure.

Her child is now three years old, is unusually healthy and robust. The bones were pliable at birth, but soon solidified. When it is known that many of the bones of the human body under any circumstances are not fully ossified until about the 20th year, it need be no source of uneasiness that the osseous structure is more than usually pliable at birth.

Mrs.———with her first child had the usual three

months of "morning sickness" which, in her case, continued the entire day. Besides many other discomforts she suffered fearfully from bloating and lameness, so much so that she was unable to leave the house during the last weeks of gestation. She bathed in warm water only frequently enough to answer the demands of cleanliness. Her labor was both severe and prolonged. She had convulsions, and after forty-eight hours of agony the child was removed with instruments. Her confinement was followed with broken breasts, metritis and cellulitis, and she was unable to sit up a moment until the child was five weeks old.

With her second child she bathed freely in cold water and lived upon the "fruit and rice diet." She had no morning sickness, no heartburn, no neuralgia, and scarcely any bloating or lameness. It may be said that the child was born *without any labor* as she *had no sensation of pain*. She had slept unusually well, awakened about three o'clock with the "breaking of the waters," called her husband, who sprang from the bed, but could not get dressed to call her mother who was upstairs, before the lusty cry of the little stranger pressed him into the work of an amateur accoucheur. She used cold water freely after her confinement, and had no gathered breasts, no inflammation, or trouble of any kind. Felt able to get about the house the following day; seemed quite absurd to lie in bed. She speaks of it joyfully as one of the greatest triumphs of her life, and preaches the doctrine to all she meets. She could not be convinced that there is any need of childbirth being accompanied by severe pain.

The following case came under my notice, and proves the efficacy of the "fruit diet."

Mrs. L. T. Colburn, living in Eureka, Kansas, is a woman, short, fleshy and what is called *solid built*. She has five children; with the first four, her labors were severe and prolonged. Some of them only terminated with instrumental interference. Relays of neighboring women were worn out in rendering her the customary aid, and some of her male relatives had to be pressed into service. During her last pregnancy, *accidentally*, she lived upon fruit and rice, and her experience was as unlike the former deliveries as night is unlike day. Her husband kept a grocery and provision store, and the family lived over the store; Mrs. C. was in the grocery frequently. She had a *craving* for lemons and oranges, and ate of them very freely, often consuming half a dozen of either at one time. Her greediness for these fruits became the by-word of friends and neighbors.

Previous to this time her eldest son, showing symptoms of irritation of the brain, subsisted upon rice. From this the entire family came to living almost totally upon rice. As usual, she made very elaborate preparations for her confinement; her physician, nurse and friends were engaged. At the end of nine months she was awakened with the "breaking of the waters." She aroused her husband. He thought he had better go for the doctor. "Why, there is no use," she said, "I have not a particle of pain." However, he feared there was something wrong, and after calling her sister, went with all possible haste for medical aid.

The sister, too, was alarmed, and went to the next door to call a neighbor. Before either returned, while Mrs. C. was entirely alone, the child was born, *without the sensation of pain.*

Mrs. C. had talked her experience over many times with her husband and friends, and was never able to account for the very marked difference in her confinements until at my *conversations* she heard me expound the "rice and fruit diet" theory. With tears streaming from her eyes she recounted her story; she said: "I am so glad to know that this is not the result of chance—that it is truth and philosophy by which all may profit."

Mrs. C. is a true woman; she told me she was willing her name and experience should be used for the benefit of others, and handed me this testimony:

"This is to certify that I know what Dr. Stockham teaches in regard to 'Fruit Diet' is true. When pregnant with my last child, I accidentally lived upon rice and fruit, and my child was born with comparatively no pain or sensible effort; could not get a physician in time, nor did I need one. In four previous deliveries I had physicians with me over twenty-four hours, and had prolonged and severe labors. I can account for the difference only through the fruit and rice diet.

L. T. COLBURN,

May 2, 1882. *Eureka, Kansas.*

Food and drink should be chosen that lack in bone forming materials. The carbonaceous elements of the grains are not objectionable, while to prevent inflammation the free use of *fats* and *sweets* should be

avoided. Of the legumina and grains: beans, barley, rye and oats, in order, contain the largest amount of mineral product; wheat not quite so much, corn almost none. Lean meat, chicken, oysters, clams, lobster, crab, etc., abound in the mineral salts. All garden vegetables, save beans, are desirable. Eggs, wheat and milk can be used moderately.

Feast on fruits freely should be the pregnant woman's motto. The oxygen of acid fruits unites with the carbon, hence besides dissolving the phosphates tends to prevent inflammation.

That the *fruit diet* prevents the diseases of pregnancy and the sufferings of parturition, is a *boon to every woman*, and all knowing this ought to preach it.

THE BILL OF FARE below suggests dishes desirable in pregnancy. Remember always to add fruit. Next to lemons and oranges, apples, peaches and plums should be chosen. For supper it is better to take simply rice or corn gruel, or if in summer a dish of ice cream. It must be understood that this bill of fare is *merely* suggestive, being intended to show that a variety of attractive dishes can be made entirely compatible with the theory.

BREAKFAST FOR EACH DAY OF THE WEEK.

MONDAY.—Rice balls, baked apples, baked potatoes, corn muffins, corn tea.

TUESDAY.—Japanese rice, apple sauce, creamed potato, corn-meal griddle cakes, barley coffee.

WEDNESDAY.—Rice muffins, fresh fruit, rhubarb on toast, breakfast patties, wheat coffee.

THURSDAY.—Hominy, stewed fruit, rice omelet, potato balls, corn muffins, hot milk.

FRIDAY.—Rice griddle cakes, stewed potatoes, milk toast, sago and cream, barley coffee.

SATURDAY. — Corn mush, tomato on toast, egg omelet, graham muffins, hot milk.

SUNDAY.—Fresh fruit, codfish balls, baked potatoes, rice muffins, chocolate, maple syrup.

DINNER FOR EACH DAY OF THE WEEK.

MONDAY. — Macaroni soup, asparagus on toast, mashed potatoes, sago-apple pudding or rice snow.

TUESDAY. — Noodle soup, raw oysters, potato puffs, succotash, baked macaroni, cold slaw, baked rice pudding or apple-tapioca pudding, fruit.

WEDNESDAY. — Tomato soup, fresh fish, mashed potatoes, beets, baked Indian pudding or rhubarb pie.

THURSDAY.—Vegetable soup, tomatoes on toast, creamed potatoes, stewed macaroni, corn, cracked-wheat pudding or cornstarch blanc-mange, fruit.

FRIDAY.—Rice soup, creamed codfish, green peas, spinach, boiled potatoes, strawberry shortcake or fruit blanc-mange.

SATURDAY. — Potato soup, macaroni and cheese, vegetable oysters, creamed cabbage, baked rice omelet, fruit shortcake, fruit.

SUNDAY.—Baked chicken, sweet potatoes, celery, unleavened bread, potato puffs, corn, farina blanc-mange with jelly, nuts and fruit.

Copy this bill of fare and paste in the kitchen where it will be handy to refer to. If one is not accustomed to the use of grains it requires some patience to learn to prepare the food so that it will prove both nourishing and satisfactory to a delicate appetite.

The following table has been carefully prepared from Payen's food analysis. It will afford assistance in selecting appropriate diet and should be studied with care.

ANALYSIS OF FOOD.

ARTICLES.	Nitrogenous	Carbonaceous	Mineral Salts.	Waste	Water
Wheat*	18	77	2	3	
Rye*	13	81	3	3	
Barley*	13	79	3	5	
Oats*	14	75	3	8	
Maize*	12	80	1	7	
Buckwheat	13	67	2	4	14
Rice	5	82	0	4	9
Beans	30	57	4	1	8
Lean Meat	19	4	5		72
Potatoes	2	24	1		73
White Fish	18	3	1		78
Eggs	16	30	2		52
Milk	4	9	1		86
Sugar Butter		100			

*A dry state. In an ordinary state grains contain 11 to 18 per cent. water.

CHAPTER X.

HYGIENE IN PREGNANCY.—EXERCISE.

Motion is a law of nature. All animal life is full of activity. To remain quietly in closely heated rooms is sure to cause disease in the pregnant woman. Without exercise, food cannot be assimilated, the processes of depurition are imperfect, the muscles lose tone and power, and the nervous system becomes prostrated. On the other hand, excessive labor often proves injurious. Some muscles are overtaxed and local strains produced. It is difficult to give directions applicable to all cases. Exercise should not be carried to actual fatigue. A weariness that *makes the bed feel good* can do no harm.

General housework is desirable, avoiding the more laborious portions, like washing, scrubbing and heavy lifting. In housework one brings into action nearly all the muscles of the body, with the exception of some of the trunk and those used in deep respiration. Even these would not lack development, if clothing caused no restrictions. In the home work a woman reaches, stoops, turns, walks, lifts and climbs stairs.

Housekeeping usually interests a woman during pregnancy if at no other time. She is *nest building*, and the home work is a labor of love. She rests in the quiet of a cozy, retired home. How easy to perform the duties that the heart sanctions and impels!

If a woman has no functional derangement, walking and carriage riding are invaluable. *She cannot be too much in the out-door air.* Properly clothed, brisk walking brings into action nearly every muscle, and is invigorating to every function. American women, as a rule, walk too little. Wearing common sense shoes, having the arms free, the dress short and loose, one can accustom herself to walking long distances with positive benefit.

Light gardening can not be too highly recommended. It has the advantage of being *out doors.* It gives postures that bring into action the unused muscles of the trunk and abdomen.

Coming in contact with the earth carries off any excess of electricity. Besides, the results, either in a supply of fresh vegetables for the table, or in floral decorations, are always satisfactory. My own experience proves that getting out and working in the ground is a cure-all for *ennui*, indigestion, torpid liver, anxiety, despondency; indeed, any slight physical derangement or mental disturbance.

Possessing no garden to cultivate, lying flat upon the ground without blanket or pillow answers a good purpose. More rest can be obtained in five minutes than in five hours upon lounge or bed in the house. Although this is contrary to all tradition and teaching, many have proved its value.

What is the object to be gained by exercise in pregnancy? Evidently absorption, nutrition and excretion. All the functions must be kept to a normal standard so that the processes of assimilation and waste can be perfectly performed.

The involuntary muscles of respiration must be ed-

ucated. Those required in parturition must be developed and strengthened. These are the muscles of the abdomen, pelvis, perineum and groin, also some of the muscles of the trunk.

Full and deep breathing is not only necessary to perfectly oxygenate the blood and by the attendant motion to promote digestion, but it makes room for the fetus as well. It expands the walls of the abdomen and chest, and strengthens the sustaining power of the uterus. Is it not possible, too, that it gives a needed *exercise* to the fetus, a constant gentle motion promoting the functions necessary to its development?

Breathing for the most part is an involuntary action, and in children and animals is performed naturally from the abdomen or flank. "Look upon that quietly sleeping cat on the rug. Its sole indication of vitality is the bellows-like motion of its body in breathing. You must also have observed, that in *all* domestic animals, at each respiration, an undulating motion extends quite through the whole trunk, and that this motion terminates only at the hindermost limbs. This is natural respiration as it is performed throughout quadruped existence?

"Have you a perfectly healthy lady friend? Lay your hand upon her and you will find that her abdomen rises and falls in exactly the same way at every respiratory act; not only so, but that this act is involuntarily performed in a more profound manner every few moments, and that this increased motion operates *particularly* upon the lowest portion of the trunk.

"Observe in the same way your own person. If you are an invalid you will find this motion dimin-

ished, perhaps suppressed. When half performed you only half live."

The lungs or air receptacles are inclosed within the walls of the chest or thoracic cavity; beneath the lungs is the great breathing motor, the diaphragm, of a convex shape when in repose. In all correct inhalation the air filling the lungs flattens the diaphragm. This must result in the expansion of the body adjacent to and surrounding the diaphragm. Natural breathing should be accomplished without any upheaval of the chest or hoisting of the shoulders.

That adults, and especially women, have not this deep *waist* breathing is on account of disuse of the muscles. The young man who is stoop-shouldered, walks the streets with his hands in his pockets or sits bent over his desk, soon diminishes the action of these muscles. The girl, deprived of pockets, may keep her head and shoulders erect, yet by faulty dress compresses and fixes the lower muscles of respiration and breathes only with the top of the lungs. When either man or woman has lost the ability to breathe deeply, a long road must be traveled to educate the muscles back to natural use.

A man in Colorado had broncorrhœa and occasional lung hemorrhage. Although he could walk six or seven miles he could not breathe below the eighth rib. I said: "I did not know a man could live, and breathe no deeper. By all your hopes of life, you must learn to breathe. To be sure you can walk, but the muscles of your legs don't help your respiration. You must take exercises that develop the diaphragm and abdominal muscles. Breathe down, *down*, and relieve the congestion of the upper

lungs." He said: "I have consulted many physicians the last six years, and why have none told me this before?" He wrote me several months afterward that simply by developing the lower muscles of respiration, he had saved funeral expenses.

The gymnast and vocalist take pains to teach deep breathing, which is simply restoring natural processes. The cow will low all day for her lost offspring without fatigue or hoarseness, because she does it with expiration and breathes from her waist or flanks. The boy who roams the woods, gathers nuts and hunts squirrels and keeps his hands out of his pockets can *hallo* hours without weariness. He breathes naturally and uses his voice naturally. He does only what the singer and orator are taught to do, because through disuse this has become a *lost art* to them.

The blacksmith or stone-cutter desiring to strike a heavy blow, does it with expiration, and the breath is driven from the lungs with an *ugh!* that is almost a groan. No matter what knotted muscles he may have upon his arm, if the great converging muscle below the lungs is not equally strong and powerful, he can not strike an effective blow. It is said that out of three hundred candidates for the Navy school recently, two hundred and twenty-five were rejected simply because of contracted chests and inefficient breathing. Manhood, womanhood, endurance and longevity depend upon lung power, and this is within the reach of all.

EDUCATE THE MUSCLES OF RESPIRATION. "To learn deep breathing be as passive as possible; that is, assume a position in which all the voluntary

motor muscles are inactive. Lie flat on the back, perfectly horizontal, without even an elevation of the head. Shut the mouth and draw the air in through the channel provided by nature—the nose. As a result of bad habits, most persons will raise the upper ribs, yet this expansion will soon yield to a movement of the lower ribs, and this again will gradually cease by continued practice, as will also every distension of the ribs. All these faulty movements will be superseded by a bulging out of the abdomen, which will be proportioned to the amount of air inhaled." Exhale also through the nose, letting the breath out slowly. Alternate costal and abdominal breathing. That is, with one inspiration swell out the sides; *burst the belt;* this retracts the abdomen; with the next, bulge out the abdomen, which is done by pressing the diaphragm down.

In pregnancy, if a woman is very delicate, unable to take voluntary exercise, let her have *massage*, which is a thorough manipulation of all the muscles.

The "muscle-beater" is a convenient and inexpensive substitute for the hand, in massage and Swedish movement cures, as it gives excellent muscular treatment without the aid of an assistant. This little instrument consists of three rubber tubes, fastened together toward the handle. With this, one can treat the skin and muscles in any part of the body.

Muscle beating is one of the most effective of all manipulations to promote nerve currents and blood circulation. It renders the skin soft and elastic. Its action extends deeply in the body, thus promoting the activity of all the blood-vessels. It restores the circulation to the extremities, thus relieving the ple-

thora of the viscera generally attendant upon chronic diseases.

The following exercises as well as those in Chap. V will be found invaluable, to promote natural breathing and develop the muscles required in parturition. Begin cautiously with the first five, increasing the number and time devoted to them as strength is gained. Always in standing and walking, assume the

MILITARY POSITION.

1. Heels in line, and together.
2. Feet turned equally outward, forming an angle of forty-five degrees.
3. Knees straight.
4. Body square to the front.
5. Chest expanded and advanced, but without constraint.
6. Arms hung easily to the side. (Swing them out and let them drop like a pendulum.)
7. Shoulders equal height.
8. Shoulder blades flat.
9. Head erect, raised at the crown (as if suspended by a cord), not tipped in any direction.
10. Chin *slightly* drawn in.
11. Form raised to full height.
12. Body poised slightly forward, so that the weight bears mainly on the ball of the foot.
13. Eyes straight to the front.
14. Whole figure in such a position that a line will pass through ear, shoulder, hip, knee and ankle.

Get this position before a glass and practice it, until it can *always* be maintained. It gives ease, grace and strength. Teach it to every child.

EXERCISE ADAPTED TO GESTATION.

1. Standing position. Carry the weight of the body as far forward and backward as possible, without lifting heels or bending knees. Count four to each movement.

2. Same position. Bend body slowly from side to side. Keep knees straight and feet firm.

3. Hands forward on hips, bend trunk at hips slowly forward; rise slowly and bend backward, always keeping the head in position with the body.

4. Inflate the lungs. Touch the shoulders lightly with the tips of the fingers. Bring the elbows slowly in front of the body, touching them together. Lift them as high as possible. Throw elbows back and up, the fingers still touching shoulders. Bring them back to commencing position. Expel air. This exercise elevates the ribs and expands lower part of chest.

5. Erect position. Inhale. Finger tips to shoulders. Hold the breath to count twenty, then with clenched fist strike downward and forward. Stop suddenly as if striking an object. Expel breath forcibly with the motion. If the motion is decisive the breath will naturally be expelled by the diaphragm.

6. Kneel on a cushion, knees far apart, stretch arms upward, parallel with each other by the side of head, bend trunk slowly backward as far as possible, remain to count four, return forward as far as possible, keeping knees and feet firm. This is one of the best exercises for strengthening the muscles of the back and pelvis.

7. Same position, hands clasped on top of head, move the body from side to side slowly, count four

with each movement and then rest. In the same position twist the body from right to left.

8. Same position, arms extended horizontally forward, throw them backward in a direct line as far as possible. This may be practiced quickly, or slowly as if carrying a weight.

9. Reclining upon back, flex the knees and sway them from side to side.

10. Same position, flex and thrust the limbs downward alternately.

11. Reclining, face downward, flex knees and sway feet from right to left.

12. Same position, with the help of an assistant, flex and extend the limbs, using resistance.

13. Same position, rest on elbows and sway shoulders from right to left.

14. Same position, elevate the body slowly, resting only on toes and elbows.

15. Recline on back and make hand thrusts, with or without weights, upward, outward, forward and downward.

In all these exercises it is persistent, patient effort that gives decided results. One will not see their effects in one day, nor one week, unless it is in greater freedom of breath. At first soreness may follow the use of muscles unaccustomed to exercise. A wet compress or a warm bath will relieve this. These exercises should always be taken in a loose wrapper and at stated hours. The best time is before the forenoon bath and before retiring at night.

The following is a heresy but nevertheless is a truth. A pregnant woman having a comfortable degree of health, *will derive as much benefit by going*

up and down stairs as by any other exercise, providing she observe the following conditions:

1. Wear a dress that is loose, light and short.
2. Keep the mouth closed.
3. Fill the lungs with air, hold the breath until the top is reached, and then expel slowly.
4. Maintain the erect position.

Notice what has been accomplished. The diaphragm and abdominal muscles have been brought into action by the deep breath, while the muscles of the thigh, pelvis, perineum and groin are all engaged in elevating the body. Each time the thigh is raised, pressure is made upon the abdominal viscera, which, if there is no outside counteracting force, are pushed outward and upward, and with the opposite movement resume their place.

The *reason climbing stairs* may injure women is, that with each upward movement, as the bowels are pushed out, they come in contact with the outside constricting pressure of corset and bands. Where can they go? Not being able to go outward they must go upward, arresting the breath, or downward, pressing the pelvic viscera upon the perineum. Is it not unjust to attribute the mischief to the stairs, when all the time it is the clothing that does the harm? Who would ever think of its hurting a boy to go up stairs, even if he takes three steps at a time, and goes up three flights without catching his breath? Dress a girl as sensibly; neither will it hurt her, for really the little anatomical difference in their organization is in the girl's favor.

Going up stairs is the best way to get desired exercise in a short time. A successful, self-educated

man of this city said that, when studying, and his brain became weary and stupid, he left his books and ran up and down stairs three or four times, accomplishing more for himself than by half an hour's walk, or by gymnastics.

When I was in medical college, some of our lecture rooms were on the fourth floor, and my own room was also on the fourth floor, and both of these buildings had high ceilings. I used to pride myself in starting at the first floor, and running to the top without stopping. I then wore the "American costume," and was nearly as free in my dress as a man. Ever since, stairs have presented no more difficulties to me than a level floor.

A lady told me that with her third child she practiced going up and down stairs on purpose for the exercise. The result was the easiest labor and the best recovery she ever had experienced.

In climbing hills, observe the same rules—*keep the mouth closed*, expel slowly through the nose, and stand erect. Not long since I read a long letter written to boys (and why not to girls as well?) upon running. The writer claimed that the whole secret of being able to run and defy all competitors was to *keep the mouth closed*. Why? Simply because it *forces deep breathing*, and compels the use of the diaphragm. Any one can prove this. So with any exercise, but especially in climbing hills or stairs, *keep the mouth closed*.

I imagine a gentlemen reading this will facetiously remark that there is no use in giving this order to women if they have a companion. I have climbed the mountains of Colorado, even been to the dizzy

heights of Pike's Peak, and I found women observed this rule better than men.

In closing, let me urge and emphasize that the pregnant woman must walk, ride, take gymnastics, climb hill and stairs, beginning according to her strength, and increasing the amount from day to day. Upon strength, power and vigor of muscles, largely depends easy labor.

CHAPTER XI.

CHASTITY IN THE MARRIAGE RELATION.

"So dear to heaven is saintly chastity,
That, when a soul is found sincerely so,
A thousand liveried angels lackey her."
—MILTON.

Many years ago during a visit to my cousin, a young married woman called with her four months old baby—a thin-necked, bloodless, blue looking child. After she left, cousin observed, "Is it not a shame that young people have so little knowledge? That poor child is suffering because the parents too frequently practice the privileges accorded in the marriage relation. The milk is deprived of its vitalizing and nutritious elements." So little of such matters had come to my knowledge that all she meant was not comprehended. From what my instincts had taught me, and what had been seen in animal life, I had no thought that this relation ever was frequent, especially during child-bearing.

To this day the picture of that wan, pale baby is impressed upon my memory, its very emaciation making an eloquent plea for the rights of children. Soon after this, I heard H. C. Wright's lecture upon "Marriage; its Duties and Responsibilities." He urged men and women to transmit the best of themselves to their children, and to be certain that offspring

were not deprived of vitality and strength by lustful indulgence. For the sake of the improvement and progress of posterity, the life of married people must be temperate. After this I read his "Marriage and Parentage," and "Unwelcome Child," with increased interest in this subject.

At that time the need of such lectures and books was not understood. In long years since, the agonizing cries of heart-broken, suffering women, the terrible death rate of little children have proven that in the marriage relation there is such a perversion of nature, such grievous wrongs committed, that one needs a pen of fire to express the living, burning thoughts, and carry the conviction of truth into the very lives of men and women. Unless by some divine miracle, the eloquence of a thousand inspired pens can not stay the floodtide of wrong and injustice now done to women and children under the cover of the marriage law.

Among animals, except in rare instances under domestication, the female admits the male in sexual embrace, only for procreation. Among some savage tribes this same rule has few exceptions. It remains for civilized people, boasting of their moral and religious codes, to hold, teach and practice that sexual union shall occur in season and out of season, averring this to be the fulfillment of nature's law.

Briefly consider different views upon this subject.

First. Those who hold that sexual intercourse is a "physical necessity" to man but not to woman.

Second. Those who believe the act is a *love relation*, mutually demanded and enjoyed by both sexes, and serving other purposes besides that of procreation.

Third. Those who claim the relation should never be entered into save for procreation.

Physicians and physiologists teach, and most men and women believe:

That sexual union is a *necessity* to man, while it is not to woman.

That there is implanted in his being demands that cannot be restrained without injury to health.

That restraint is followed by absorption of the elements of generation, producing effects not unlike the absorption of a virulent foreign element.

That woman naturally has not so much passion as man, has not so much secretion, also has an outlet in menstruation, consequently has not the same demands nor the same injury if not gratified.

Are these claims based upon truth? What are the facts from which to infer what men and women *naturally* are?

When woman *only* is taught that virtue is the brightest jewel in her crown, when the popular verdict is that womanliness and modesty are synonyms for repression, when she lives in fear of maternity, and believes restraint on her part prevents vitality of life germs, when, too, erroneous habits pervert every function, how can we tell what is natural for her?

Then, on the other hand, when man is taught that virtue is *not* a manly accomplishment, when the passions are stimulated by unnatural habits of living, by impure conversation, thoughts, books and practices; can we say this strength of passion is purely natural and healthy?

A. E. Newton says: "They who have never carefully noted the effects of alcoholic stimulants, of cof-

fee, oysters, eggs, spices and animal food, as well as they who find pleasure in filthy conversations, can not surely, with any justness, charge *nature* with the exuberance of their amatory desires."

We teach the girl *repression*, the boy *expresion*, not simply by word and book, but the lessons are graven into their very being by all the traditions, prejudices and customs of society.

What are some of the results of this theory?

Notably, in the first place, we have what is called the "social evil." Women, licensed by men, make a business of prostitution, selling their bodies that this demand—this *necessity*—of the male shall be supplied. In visiting these women, men simply yield to this necessity of their nature; consequently commit no wrong!

Women not having the same demands, by entering this life, or even permitting the act once, violate the laws of their being; according to the social codes, perpetrate the greatest crime in the calendar! They become outcasts. If they fill their lives with noble and philanthropic deeds, this one sin is so foul and rank, is such an offense, they have little hope of remission, even from a just and all-loving God.

Can the fact that men are upheld, their crime even condoned, while women, as partners in this terrible evil, are not only ostracised, but irretrievably lost, be explained in any other way?

Witness the effect of this same theory in the marriage relation! The man who has been accustomed to gratify his passions promiscuously, seeks and marries a lovely, virtuous girl. She is not supposed to have needs in this direction. Neither has she

learned that her body is her own and her soul is her Maker's. She gives up all *ownership* of herself to her husband, and what is the difference between her life and the life of the public woman? She is sold to one man, and is not half so well paid. Is it too strong language to say she is the one *prostitute* taking the place, for the man, of many, and not like her, having choice of time or conditions? In consequence she not only suffers physically, but feels disgraced and outraged to the depths of her soul.

She is liable to a chance maternity and the *unwelcome* child is deprived of physical vigor, and may be endowed with lustful passions and morbid appetites, if he does not indeed curse his own existence.

At the close of one of my health *conversations* after speaking upon this subject, a lady tremblingly, but touchingly, gave her experience. She said: "Ladies, when I was married two years I was the mother of a puny, sickly baby; it had required incessant care and watching to keep it alive. When it was only seven months old, to my surprise, astonishment and horror I felt *quickening*, and for the first time, I knew I was pregnant again. I was abased, humiliated. The sense of degradation that filled my soul, cannot be described. What had been done? The babe that was born and the babe that was unborn were robbed of their just inheritance. Remorsefully and tearfully I told my mother. She says: 'Why, child, you should not grieve; don't you know your children are legitimate?' My whole being arose in protest; I stamped my foot and almost screamed; 'Although my husband is the father of my children, they are not legitimate. No man-made laws, nor priestly rites can ever make an

act legitimate that deprives innocent children of their right to life and health.' With sobs and moans reaction came and I fainted in her arms. What was the sequel? Two years later both of these children after a brief existence lay in the 'city of the dead,' and until my husband and I learned *the law* we could not have children to live."

Parties holding the *second theory* claim:

That coition is a love act.

That it should never occur except when there is mutual participation on the part of both man and woman, and should be governed and guarded so as to control the creative power.

Thus this act is the emblem of love; by it there is a mutual exchange of subtle elements which gives health and vigor, and more firmly cements the union.

That if the lives of married people accorded to this theory the demand of the man would be no more frequent than that of the woman.

That the husband cannot sustain this relation satisfactorily and without injury to himself unless there is reciprocation on the part of his wife.

That under this mutual relation there is *no loss* to either party but a mutual compensation.

This theory has its arguments and certainly is more human than the first.

A woman once consulted me who was the mother of five children, all born within ten years. These were puny, scrofulous, nervous, and irritable. She herself was a fit subject for doctors and drugs. Every organ in her body seemed diseased and every function perverted. She was dragging out a miserable existence. Like other physicians I had prescribed in

vain for her many maladies. One day she chanced to inquire how she could safely prevent conception. This led me to ask how great was the danger. She said: "Unless my husband is absent from home, few nights have been exempt since we were married, except it may be three or four immediately after confinement.

"And yet your husband loves you?"

"O, yes, he is kind and provides for his family. Perhaps I might love him but for this. While now, will God forgive me, I *detest*, I *loathe him*, and if I knew how to support myself and children, would leave him."

"Can you talk with him upon this subject?"

"I think I can."

"Then there is hope, for many women cannot do that. Tell him I will give you treatment to improve your health, and if he will wait until you can respond, *take time for the act, have it entirely mutual from first to last*, the demand will not come so frequently."

"Do you think so?"

"The experience of many proves the truth of this statement."

Hopefully she went home, and in six months I had the satisfaction of knowing my patient was restored to health, and a single coition in a month gave the husband more satisfaction than the many had done previously, that the creative power was under control, and that my lady could proudly say "I love," where previously she said "I hate."

If husbands will listen, a few simple instructions will appeal to their *common sense*, and none can imagine the gain to themselves, to their wives, their

children and their children's children. Then it may not be said of the babes that their "Death borders on their birth, and their cradle stands in the grave."

The third theory, that the sexual relation should never be sustained, save for procreation, has many adherents. They teach that there are other uses for the procreative element than the generation of offspring—far better uses than its waste in momentary pleasure. This element, when retained in the system, the mental powers being properly directed, is in some way absorbed and diffused throughout the whole organism, replacing waste, and imparting a peculiar vivifying influence. It is taken up by the brain and may be coined into new thoughts—perhaps new inventions—grand conceptions of the true, the beautiful, the useful, or into fresh emotions of joy and impulses of kindness, and blessings to all around. It is a procreation on the mental and spiritual planes instead of the physical. *It is just as really a part of the generative function as is the begetting of physical offspring.*

They claim that men eminent for grand achievements in fields of science, philosophy, invention, religion and philanthropy, have been men whose lives accorded to this theory, referring us as illustrious examples to Plato, Newton, Lamb, our own Irving and Whittier, and always remembering the humble Nazarene.

They also claim that to woman belongs the "creative power," that she must choose when a new life shall be evolved, and only by adhering to this law can she be protected in the highest function of her being—the function of maternity. Mrs. Chandler in

"Motherhood," says: "Every mother from the hour when the new life commences, is overshadowed by the Most High. Could she understand her needs and powers, and secure to herself respect due to her sacred office, and, free from all polluting intrusion upon herself, bathe her spirit in the influxes which the life within attracts, very rapidly would disappear the loathsome deformities, the discordant spirits now blotting the fair proportions of humanity."

She claims that in the Scripture statement in reference to the parents of the child Jesus, that Joseph "knew not" Mary from the hour when the announcement of the new life was made until the birth of the child, is involved a deeper and more important meaning than the Christian world or the medical profession have discovered. Thus this "undisturbed maternity, which was essential to the ushering in of the Prince of Peace, is equally in all cases a vital and indisputable necessity for the improvement of humanity. Motherhood should be a shrine unpolluted by selfishness. O woman! This would be thy recompense for all the sufferings and agonies which pertain to physical womanhood and motherhood."

It is encouraging for those who believe this thought to know that not only woman but men standing high in learning and literature espouse and teach it. "The Science of a New Life," by Dr. Cowan, gives what he terms the *law of continence* as a central thought. It is full of practical lessons for married people, and has had a large sale.

"The Better Way," a pamphlet, by A. E. Newton, teaches that only through continent lives can we hope for progress.

"*Plain Facts*," by Dr. Kellogg, has had an immense sale. He, too, teaches the same thought.

Note, all these books are written by *men*—not by women, with some fancied wrongs to redress; but by men strongly in sympathy with the needs of the race. They claim that a better and higher generation can only be attained through continent lives. At least, this is a subject demanding the serious consideration of scientists, philosophers and philanthropists.

If the law of continence is not the law to govern one's entire life, it is natural and reasonable that the mother should be exempt from the sexual relation during gestation. The husband should ever be ready to comfort and cheer with his sympathy. He should bear in mind that at this time his wife and child need the conservation of all forces, and consequently he should "observe all laws that will *let reason reign and passion serve*."

The observance of the law of continence will do much to palliate the many nervous symptoms of pregnancy. I have known women so sensitive during gestation that even a touch or a kiss from the husband caused nausea and other distressing symptoms.

"The sexual relation at this time exhausts the mother and impairs the vitality of the child, inducing in its constitution precocious sexual development. The mind should be free from the subject, and every circumstance that has a tendency to promote desire should be studiously avoided. For this reason separate beds and even sleeping rooms for husband and wife are to be recommended."

It is worth investigating, whether the cause of much of the pain at parturition may not also be re-

moved by the practice of continence during gestation.

Can not those in charge of hospitals and charitable institutions make a study of the subject? A collection of statistics would help to establish or refute this theory. The influence on offspring of continence invites the serious thought of all who desire the progess of purity. Thoughtful parents will question whether by living during the mother's gestation on the low plane of physical love, they are not implanting in their child the seeds of sensuality. Keeping their lives in the higher spiritual love they may have offspring to whom a life of purity and self-control will be natural.

"In brief, the law seems to be that, such is the intimate connection between the mother and the embryo, the exercise of any faculty of her mind or soul, or of any organ of her brain or body, stimulates and developes in proportionate degree the corresponding faculty or organ in the incipient child."

Of what use is it to teach the young lessons of purity and morality, when by prenatal culture, they have graven in their very lives lessons of prostitution? Many men violate this law of reproduction through ignoranee. Were they taught the results, and how to live lives of self-control, many would gladly accept the lesson.

To live continent lives, avoid food containing aphrodisiac stimulants, such as coffee, eggs, oysters, and animal food. *Omit the evening meal;* for the purpose desired this stands paramount to all other means. Let the life be temperate in every respect, and with a strong will the victory can be won. Remember that

it is the action of the *mind* chiefly, that stimulates excessive seminal secretion. The husband being the devoted lover, with similar untiring, delicate attentions, can attain the same self-control he practiced during courtship. The wife will more surely retain her health and youthful charms in bearing welcome children. Women will rejoice in a glad maternity, and a higher, nobler and more God-like posterity will people the earth.

A few months since I read a paper entitled, "The Hygiene of Pregnancy," before a Medical Association. In it were sentiments similar to the above. It was read hesitatingly, anticipating only adverse criticism from the men composing that body. Previous to the reading of my paper, the members had taken but little interest in the convention except to promulgate pet theories. The weather was warm, and groups were sitting on the piazza, smoking cigars, indifferent to subjects under discussion. The reading had not proceeded far, however, when cigars were thrown away, and the entire convention were listeners. Judge of my surprise when the thoughts expressed received a long and hearty applause. Most of those men used tobacco, some drank beer, and all ate animal food. They were not the class of men from whom recognition of such radical sentiments would be expected.

Let the justness of this subject be properly presented to them, and most men will be convinced of its truth. Men naturally reverence the maternal in woman, and if taught that *continence* serves the best interests of motherhood and posterity, will cheerfully accord their lives with it.

A principal of a high school in Iowa was a married man many years before he knew that the sexual relation was ever sustained during pregnancy. When he learned it, he asserted that his whole soul was filled with shame and disgust that his sex had no better knowledge of their protective duties relating to maternity.

Those desiring the best reproduction of themselves should learn:

That motherhood is the central fact of human life.

That the first right of a child is to be well born.

That every mother should be set apart during pregnancy for the ante-natal culture of her child.

That control of appetite is the first step in human culture.

That no man should become a father who can not and will not observe the demands of temperance in all things for the benefit of his child.

CHAPTER XII.

VENTILATION.—REST.

The pregnant woman breathes for two. While pure air is desirable for all persons under every condition, it is doubly so for her. Nothing is more essential to the healthful nourishment of the fetus than that the blood be thoroughly oxygenated. Otherwise the child may be weak and feeble, and liable to disease.

Everywhere, in railroad cars, streets, shops, public halls and dwelling houses, there is *foul air*—air that is loaded with *exhalations* from the lungs, *emanations* from the body, and is often vitiated by *tobacco* and *alcohol*. Architects, builders and occupants pay but little attention to ventilation. The most important purpose of a building is evidently to keep the heat in in the winter, and keep it out in the summer.

With every breath a person exhales quite a large proportion of carbonic gas, which is a deadly poison, and at the same time inhales the life-giving oxygen, constantly exhausting the supply. Yet the great fear of drafts, as well as need of economizing heat, causes most persons to breathe the same air over and over again. Gases that are inimical to health and life are constantly inhaled. If one breathed deeply and only pure air it would atone for violation of many other physiological laws. The proof of this is seen in the effects of a hunter's or a pioneer's life.

The following from the *Lancet* gives some practical ideas upon the ventilation of bedrooms:

"If a man were deliberately to shut himself for some six or eight hours daily in a stuffy room, with closed doors and windows (the doors not being opened even to change the air during the period of incarceration) and were then to complain of headache and debility, he would justly be told that his own want of intelligent foresight was the cause of his suffering. Nevertheless, the great mass of people do this every night of their lives, with no thought of their imprudence.

"There are few bedrooms in which it is perfectly safe to pass the night without something more than ordinary precautions to secure an inflow of fresh air. Every sleeping apartment should, of course, have a fireplace with an open chimney, and in cold weather it is well if the grate contains a small fire, at least enough to create an upward current to carry off the vitiated air of the room. In all such cases, however, when a fire is used, it is necessary to see that the air drawn into the room comes from the outside of the house.

"Summer and winter, with or without the use of fires, it is well to have a free ingress for pure air. This should be the ventilator's first concern. Foul air will find an exit if pure air is admitted in sufficient quantity, but it is not certain that pure air will not also be drawn away. So far as sleeping rooms are concerned it is wise to let in the air from without. The aim must be to accomplish the object without causing a great fall of temperature. The windows may be drawn down an inch or two at the top with

advantage, and a fold of muslin will form a 'ventilator' to take off the feeling of draft. This with an open fireplace will generally suffice, and produce no unpleasant consequences, even when the weather is cold."

While the open fireplace, 'tis true, gives splendid ventilation, at the present price of fuel it is a luxury within the reach of few. Yet, taking into consideration how effectually it "slams the door on the doctor's nose," it is an economical investment.

Recently there have been open stoves constructed on a new principle, that are very desirable. They are cheerful and decorative in appearance, equal to other stoves for cleanliness, economical of heat, and what is so needful in every dwelling, furnish a constant change of air—are in themselves ventilators.

One building a new house can easily have ventilation by making a dry well of good dimensions in the yard and filling it with coarse charcoal. There should be an air-shaft leading to it, and one from it into the house. The air from it must go directly to the furnace. It should be so constructed that water will drip slowly though the charcoal. In this way the moisture and charcoal purify the outside air, freeing it from dust and smoke, while the pit cools it in the summer, and modifies the temperature in the winter. Better air is obtained than if let in by windows and doors.

The house should have flues for the escape of impure gases. Common grates will answer the purpose. An abundance of pure air is constantly supplied.

In regard to fresh air in sleeping rooms, Dr. James H. Jackson says: "There appears to be a want of a

clear understanding of the difference between the terms cold air and pure air, and many persons do not seem to comprehend that the air of a room may be both pure and warm. They seem not to know that the temperature does not affect the purity of the air so long as there is opportunity for proper circulation. Pure air is not necessarily cold, nor is cold air always pure.

In order to have good ventilation, provision should always be made for a *circulation of air*. It is not sufficient to provide an entrance for outside air; exit through an opposite door or window or flue should also be secured. A good way to do this is to let down a window two or three inches at the top, and the air thus let in becomes somewhat warmed by the heat which rises. Here then you have warm fresh air. Now bad air, being loaded with carbonic acid gas, sinks to the bottom of the room. Some way must therefore be provided for its escape. A transom near the bottom of the door would answer the purpose; an open fireplace furnishes an outlet for impure air, or if both these are wanting, the door may be left slightly ajar, or a simple or inexpensive ventilator may be made by fitting into the stove-pipe, above its damper, another piece of pipe that shall be cut off within two inches of the floor; this pipe also to be provided with a damper which can be opened at will. A very effective draft is thus created near the floor, which takes all foul air up into the chimney.

"I do not approve, on the contrary I condemn the habit of sleeping, even in the coldest weather, in a small room, windows closed, weather strips on the doors and sashes, and every possible device used to

keep out the outside air. In such a room one must necessarily respire the same air many times, and the fact that it is cold does not make it the less injurious. Nature throws off by the breathing process certain poisonous elements which to re-breathe and re-absorb is most pernicious. No one who is not robust should sleep in a room so cold that the windows and doors must all be closed to keep warm. A much more healthful way is to have the temperature of the sleeping room the same as that of the living room; under no circumstances do I deem it advisable for an invalid to sleep in a room that can not have pure, warm air.

"Remember that the important point is *circulation*, and that this may be had without letting in a great volume of cold air.'

A small amount of outside air can be let into a room by raising the window four or five inches and fitting a board at the bottom. There is a space left between the sashes that allows some air to enter. This, however, is not sufficient in a small bedroom, unless for the coldest weather. "The only objection to a draft is, that the draft is generally not strong enough. An influx of fresh air into a room is a ray of light into darkness, a messenger of Vishnu visiting an abode of the lost." Even the weak and enfeebled can accustom themselves to plenty of pure air, and also to drafts.

To test the condition of a sleeping room, leave it closed in the morning, go into the fresh air, for ten or fifteen minutes, return to the room, and if the air seems less pure than the outside air the ventilation is imperfect. *The nose is a sentinel to warn us of danger.* It should be educated to tell the condition of the

air we breathe. What a benefit to mankind if some one would invent a gauge to determine the amount of impurities in the air, as heat is tested by a thermometer. Would it not on many occasions give us startling revelations?

To aid in improving the air of a house, and especially of a sleeping room, we have a safe, efficient and economical means in the use of unslaked lime and charcoal. A small basket of these should be placed in every invalid's room, or where children sleep, for the purpose of absorbing the carbonic acid gas of the lungs, and the effluvium of the human body.

The discovery of this simple method is attributed to Dr. Bonizzardi, of Italy. He claims, "That people die much more rapidly through the deleterious effects of miasma and carbonic acid gas than by the want of oxygen in the air. To prove his theory, he put three fowls on a perfectly even floor, under three glass cases, and placed in the case containing the first bird nothing but the fowl, in the second one a piece of unslaked lime, while the third contained some pieces of charcoal. In half an hour after the birds were confined he examined them, and found that the bird having neither lime nor charcoal was dead, that the one in the second case containing the unslaked lime was barely alive, while the bird in the case containing charcoal was quite active, and showed no sign of suffering.

"The first fowl, having neither lime to absorb the carbonic acid gas of the lungs, nor charcoal to collect on its surface the effluvium of the surrounding air, died of blood poisoning, produced solely by the action of the carbonic acid expelled from the lungs.

"The fowl that was supplied with the lime was only quite ill, because the lime had removed one of the causes of death by absorbing the carbonic acid gas; while the bird confined in the case containing the charcoal was only slightly indisposed or ill, because the charcoal absorbed all the exhalations of the lungs and body.

"These experiments prove that people die far more quickly from the deleterious action of bodily exhalations than from any deficiency of oxygen in the air. The moral of these experiments is: That a small basket of charcoal should be placed in the room of every invalid, in order that it may absorb the carbonic acid gas floating in the air, and thus render the atmosphere purer and more wholesome."

REST.

A daily *siesta* ought to be taken by the pregnant woman. Even if she feels well and is not accustomed to rest during the day, it would be far better for her to take it regularly. She should plan for it as for any other duty, and will gain by the ability to accomplish more.

Near noon is the best time for resting; let it follow the bath. She is then refreshed for her dinner and afternoon occupations. This habit can not be too religiously observed. If she rests better alone, she should go by herself, and never be disturbed. Some people can sleep better to lie down where others are talking or reading. The hum of voices quiets them by diverting their own thoughts. I knew one mother that could only get a nap in the daytime, even if she had been deprived of much sleep, by lying down in

the room where her children were playing. Nothing they could do, except to quarrel, would disturb her. They could laugh, sing, scream and jump—she would sleep soundly, but if one wrangling word passed between them she was instantly aroused.

Do not acquire the habit of sleeping in a chair, more speedy restoration is given by lying flat upon the back, without a pillow.

RECAPITULATION.

To give a woman the greatest immunity from suffering during pregnancy, prepare her for a safe and comparatively easy delivery, and insure a speedy recovery, all hygienic conditions must be observed.

THE DRESS must give:

1. Freedom of movements;
2. No pressure upon any part of the body;
3. No more weight than is essential for warmth, and both weight and warmth evenly distributed.

These requirements necessitate looseness, lightness and warmth, which can be obtained from the union under-clothes, a princess skirt and dress, with a shoe that allows full development and use of the foot. While decoration and elegance are desirable, they should not sacrifice comfort and convenience.

LET THE DIET be light, plain and nutritious. Avoid fats and sweets, relying mainly upon fruits and grains that contain little of the mineral salts. By this diet bilious and inflammatory conditions are overcome, the development of bone in the fetus lessened, and muscles necessary in labor nourished and strengthened.

EXERCISE should be sufficient and of such a char-

acter as will bring into action gently every muscle of the body; but must particularly develop the muscles of the trunk, abdomen and groin, that are of special importance in labor. Exercise, taken faithfully and systematically, more than any other means, assists assimilative processes and stimulates the organs of excretion to healthy action.

BATHING must be frequent and regular. Unless in special conditions better results are obtained from tepid or cold bathing which invigorates the system, and overcomes nervousness. The sitz-bath is the best therapeutic and hygienic measure within the reach of the pregnant woman.

Therefore, to establish conditions which will overcome many previous infractions of law; *dress* naturally and physiologically; *live* much of the time *out of doors;* have *abundance of fresh air* in the house; let *exercise* be *sufficient* and *systematic;* pursue a *diet of fruit,* rice and vegetables; *regular rest* must be faithfully taken; *abstain* from the sexual relation. To those who will commit themselves to this course of life, patiently and persistently carrying it out through the period of gestation, the possibilities of attaining a healthy, natural, painless parturition will be remarkably increased.

If the first experiment should not result in a painless labor, it, without doubt, will prove the beginning of sound health. Persisted in through years of married life, the ultimate result will be more and more closely approximated, while there will be less danger of post partum diseases; and better and more vigorous children will be produced.

Then pregnancy by every true woman will be

desired, and instead of being a period of disease, suffering and direful forebodings, will become a period of health, exalted pleasure and holiest anticipations. Motherhood will be deemed the choicest of earth's blessings; women will rejoice in a glad maternity, and for any self-denial will be compensated by healthy, happy, buoyant, grateful children.

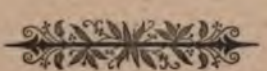
ELIZABETH CADY STANTON, in a lecture to ladies thus strongly states her views regarding maternity and painless parturition: "We must educate our daughters to think that motherhood is grand, and that God never cursed it. That the curse, if it be one, may be rolled off, as man has rolled away that of labor; as it has been rolled from the descendants of Ham. My mission among women is to preach this new gospel. If you suffer, it is not because you are cursed of God, but because you violate his laws. What an incubus it would take from woman could she be educated to know that the pains of maternity are no curse upon her kind. We know that among the Indians the squaws do not suffer in childbirth. They will step aside from the ranks, even on the march, and return in a short time bearing with them the new-born child. What an absurdity, then, to suppose that only enlightened Christian women are cursed.

"But one word of fact is worth a volume of philosophy; let me give you some of my own experience. I am the mother of seven children. My girlhood was spent mostly in the open air. I early imbibed the idea *that a girl is just as good as a boy*, and I carried it out. I would walk five miles before breakfast, or ride ten on horseback. After I was married, I

wore my clothes sensibly. Their weight hung entirely on my shoulders. I never compressed my body out of its natural shape. When my first four children were born, I suffered very little. I then made up my mind that it was totally unnecessary for me to suffer at all; so I dressed lightly, walked every day, lived as much as possible in the open air, ate no condiments, and took proper care of myself. The night before the birth of the child I walked three miles. The child was born *without a particle of pain.* I bathed it and dressed it myself, and it weighed ten and one-half pounds. That same day I dined with the family. Everybody said I would surely die, but I never had a moment's inconvenience from it. I know this is not being delicate and refined, but if you would be vigorous and healthy, in spite of the diseases of your ancestors, and your own previous disregard of nature's laws, try it."

Every woman can not attain to as perfect health as Mrs. Stanton, for all have not as good conditions of heredity, nor did all learn early that "A girl is as good as a boy." Mothers in earnest for the best good of their children, will by constant purpose and deliberate effort, approximate the high standard she established, and emulate her example in using the means to enhance desired results.

"For life is not to live, but to be well."



CHAPTER XIII.

PARTURITION.

The hour arrives, the moment wished and feared;
The child is born by many a pang endured!
And now the mother's ear has caught his cry;
Oh! grant the cherub to her asking eye!

Labor is effected by dilatation of the *cervix uteri* and contraction of the uterine and abdominal muscles. This dilatation is the first stage. In the second, expulsive efforts occur, causing the advance and birth of the child. The action of the uterus in expelling the fetus is analogous to that of the rectum in expelling its contents. In each case the abdominal muscles powerfully co-operate with the peristaltic action of the organ. Uterine contractions, once established, continue intermittently until the contents are expelled. These contractions are usually attended and recognized by pain. They are called *labor pains.*

It is well established by physiologists that the suffering attendant upon labor is abnormal, and only a result of the violation of nature's laws; that by a more or less thorough compliance with those laws, most women can approximate to a condition in which there shall be no suffering in childbirth.

A few days preceding labor, there is usually a muco-sanguineous discharge from the vagina. This is called the show. It indicates dilatation of the cer-

vix and relaxation of the vagina. It is often accompanied by *malaise* and restlessness, and in some by headache and loss of appetite.

In 96 per cent. of all cases, the head of the child is the presenting part. At first the long diameter of the head is in the oblique diameter of the pelvis; as it passes the pelvic brim, it turns so as to lie across from back to front, the chin pressing upon the breast, and the crown of the head advancing. The first pains are *grinding*, *scattered* and irregular, felt mostly in the anterior portion of the pelvis and groin. These effect dilatation of the os, which is often accompanied by severe sufferings, especially when diseased conditions exist. Afterward the pains are in the abdomen. As the head advances there is great suffering in back, hips and groin, with a disposition to *bear down.*

This disposition need never be urged by attendant, nor forced by the patient. Old ladies often say, "Bear down! make an effort!" supposing that this will facilitate labor. The fact is that these attempts to assist nature are retarding instead of helpful, and are often the cause of accidents. Nature indicates all effort essential to progress.

The bag of waters consists of the membranes which inclose the fetus and liquor-amnii.

Protruding through the os when dilatation is effected, it precedes the head, prepares the way for it, and lessens the liability of contusion of the soft parts. These membranes usually rupture with an expulsive effort, before the close of the labor. The uterus then contracts firmly on the body of the child, and labor advances rapidly to completion. In rapid labor,

however, the bag is sometimes expelled entire with the child.

The physician requires the assistance of but one attendant besides the husband. This should be an educated nurse or a friend, who can command herself in emergencies. The old time custom of having a neighborhood party on the occasion of an increase in the family, has happily gone out of date.

When this custom was in vogue both patient and physician were often seriously annoyed by the crowd of neighbors who thronged the house. Many times the grand "set out" for the table was so expensive as to take the whole month's salary of the working man, while perhaps the "doctor's bill" remained long unpaid.

Conversation should be cheery and foreign to the occasion. Obscene anecdotes and direful childbirth experiences should be avoided. During the entire process of parturition, the patient should have the advantage of pleasant, comfortable and sanative surroundings. Her mind should be free from care and anxiety. The best in the house should be appropriated to her use. Her room should be light and airy.

Every necessity and convenience should be in readiness for the occasion. Provide two yards of rubber cloth for protecting the bed, a fountain syringe, a hot water bottle, safety-pins, antiseptic absorbent cotton, glycerine, arnica, ammonia, carbolic and castile soap, calenduline, olive oil, and cosmoline. Also have an abundant supply of soft rags. They should be large and clean. Remove the seams and buttons. Old sheets torn in quarters or pillow slips are the most desirable.

Make the bed as if one were going to sleep in it. Place the rubber cloth over the undersheet. Cover it with an old quilt or comfort that will wash easily. Have the bed set out from the wall so that both sides can be used. Prepare the side for the patient that will enable the physician to use the right hand.

Let the patient wear the garments she desires to have on after her confinement, having care to protect them by folding back smoothly, and fastening a sheet loosely about the waist. After labor begins, she should take only liquid food. The bladder should be relieved frequently. If the bowels have not been moved within twenty-four hours, a copious enema of warm water should be taken.

Until the last stage, the patient can assume any position affording the most comfort. Usually, she is inclined to change frequently, sitting, lying, walking and even kneeling. When expulsive efforts occur, she ordinarily prefers to recline upon her back, with knees flexed and hips elevated. At this time, she naturally pushes with her feet, and pulls with her hands. A padded box should be firmly fixed at the foot of the bed for the feet. She can grasp the hand of an assistant, or have some reliable mechanical contrivance for her hands. The simplest is a strip of new muslin, ten inches wide, put around the foot of the bed, and tied, leaving it the desired length for a good purchase. In a prolonged labor, the *obstetric harness* is the most valuable assistance. This is a padded belt for the back, with straps extending to the knees and feet. From the knees are counter straps, with handles for the hands. With this simple contrivance, a physician requires less assistance.

Supporting the perineum is not only absolutely unnecessary, but also apt to be exceedingly injurious. Meddlesome midwifery is always to be deprecated. A natural labor needs no manual local interference. Although many authors and teachers recommend support to the perineum in the last stages, yet more ruptures may be attributed to this practice than to leaving it entirely untouched. A Canadian physician asserts that he has attended 1,700 women in confinement without giving support to the perineum, and yet in no case did rupture occur.

When the head is born receive it in the hand and support it until the shoulders are expelled. If the next contraction does not bring them, put a finger in the axilla of the fetus, and make slight traction. The whole body will soon be born. Pass both hands under the child and lay it as far from the mother as possible without stretching the cord. Place it upon the right side, shoulders and head slightly elevated. Wipe any mucus there may be from mouth and nostrils. Cover baby with a warm, soft flannel. Make the mother comfortable. Change her position, straighten the bed, put dry cloths to her, give her a drink, etc., leaving the infant *until the pulsation has entirely ceased in the cord.* This will require from ten minutes to half an hour.

Usually as the child is ushered into the world, it sets up a lusty cry, indicating that respiration is established. Crying is not essential, as some authors claim, and the prompt covering usually causes it to desist. If it does not breathe at once, a little brisk spatting on the breast and thigh may establish respiration. If this is not effectual, dash cold water in the

face and on the chest. Still failing, artificial respiration must be established. To do this, close the nostrils with two fingers, blow into the mouth, and then expel the air from the lungs by gentle pressure upon the chest. Continue this as long as any hope of life remains.

Sever the cord when pulsation has entirely ceased in it. Use a dull pair of scissors, cutting about two inches from the child's navel. Following these directions, *no tying is essential.* This method has its advantages. By tying, a small amount of blood is retained in vessels peculiar to fetal life. This blood by pressure or irritation may prevent perfect closure of the foramen ovale, and be a cause of hemorrhage. Besides, it must be absorbed in the system, causing jaundice and aphtha, so common in young babes. Prejudices exist against adopting this treatment, as it is contrary to that usually adopted.

I first heard of this manner of treating the cord in 1870. It was so clearly explained that I was convinced that leaving the cord untied would result in great gain to the child. Still, my education and habit had been to the contrary, and my prejudices prevented my venturing upon the new method. A few years after this I met a German physician who had not tied a cord in eighteen years. He said: "Don't be afraid; your babies will do better, and there is less danger of losing them." I tested it and proved to my own satisfaction that it is the best method. One has only to recollect to wait until the *pulsation in the cord ceases entirely*, and sever as before stated.

By no means wash and dress the baby as soon as it is born. Consider the marvelous change that has taken

place in all its functions. Respiration is established, and the blood, instead of going to the placenta for oxygenation, goes to the lungs; the stomach and all the organs of digestion and elimination are brought into action; the skin, also, with its innumerable perspiratory ducts, begins its work. Give nature time to establish these processes before the system is taxed by being washed and dressed. An Indian pappoose might be plunged into water at once without detriment, but no white baby of this country has sufficient vitality to safely undergo this shock. Rub the baby all over with olive oil, cover warmly, and leave it to rest and sleep.

While the baby is resting the mother demands especial attention. Contraction of the uterus will soon be renewed to expel the placenta. Usually contractions do not recur for half an hour, and it may be two hours before the after-birth is expelled. Should there be no hemorrhage and the walls of the uterus contract, there is no cause for uneasiness.

For expelling the placenta contractions can be induced by laying upon the bowels cloths wrung from cold water, or by manipulating the abdomen after dipping the hands in cold water. Also, the patient may blow into her closed hand, or give a slight cough. If there is hemorrhage, the vein of the umbilical cord should be injected with cold water. This, in many cases, removes a retained placenta. This valuable suggestion is a fact unknown to many practitioners. The placenta does not adhere as often as some suppose. If attached there is seldom danger from delay in removal, unless there is hemorrhage. After it is expelled it should be burned or buried.

The mother must be bathed in tepid water, sponging carefully her back, abdomen, thighs and perineum. Lay a cloth to the vulva wrung from a lotion of arnica, one tablespoonful to a quart of water. If there is soreness in the pelvic region a compress wet in the same lotion can be worn.

The parturient woman requires no bandage. If a compress is needed a towel can be pinned around to keep it in place. Also, if there is discomfort from undue enlargement and relaxation of the abdomen, a bandage applied loosely will give relief. Otherwise no bandage is essential. The common belief that it restores a woman's form is a mistake. She returns to her former size better without than with it. If worn at all snug it is likely to cause inflammation that will produce bloating. It also presses the uterus down in the pelvis and in the relaxed condition of all the parts may cause prolapsus uteri. The frequency with which prolapsus occurs may justly be attributed to the unnatural pressure thus induced. A parturient woman makes a more speedy and excellent recovery without the bandage.

After the bath, change the soiled quilts and cloths for fresh ones. Apply a large cloth over the arnica cloth at the vulva, make the bed look tidy, and leave the patient to rest. The house should be made quiet and every means used to encourage complete repose. If it is night, let the attendants retire and darken the room, the nurse remaining within call.

In case of thirst let her have cold or hot water, weak tea or thin gruel, as she feels inclined. Ordinarily she needs no remedies. Nature simply demands rest. Only a few years since a woman was

not allowed to go to sleep until she had taken a bowl of panada and the inevitable dose of castor oil. One woman told me she dreaded the castor oil more than having the baby. It is unnecessary and likely to produce harm. For a few days torpidity of the bowels is natural, and if forced to action, inflammation and piles are likely to result. Surgeons have long been familiar with this same state of the bowels in other cases. Constipation is the natural sequence of amputation or fractures. The system rallies to meet one great demand and temporary torpidity of the bowels may be expected. Do not be influenced to take any drug. Simply rest. Surely at no time in one's life is rest so sweet.

The long months of anticipation, doubt and endurance are over, the hour long feared has culminated in the bestowment of a gift which an angel might receive with rapture. A babe, the object of woman's profoundest and most sacred passion has been given her for her very own, to nourish, guide, develop and instruct, of which even death cannot rob her. A solemn joy beyond words fills her soul, which none should needlessly disturb.

> He comes—she clasps him; to her bosom pressed,
> He drinks the balm of life, and drops to rest.

CHAPTER XIV.

DYSTOCIA.

IN DIFFICULT LABOR a physician's skill and knowledge is imperatively demanded. Yet a few practical hints for emergencies may be advantageous.

Presence of mind, with the knowledge given in the preceding chapter, will enable even an inexperienced person, in the chance absence of the doctor, to conduct a case of natural labor satisfactorily.

Prolonged and difficult labor may result to one who has not had the benefit of the "fruit diet" and other hygienic measures herein recommended, or who on account of disease and deformity, has not been able to accomplish desired results. In malformations of pelvis, in face or shoulder presentations, placenta previa, etc., surgical interference will be required.

Muscular contractions may be inefficient or the os slow to dilate from rigidity. Caustic treatment, so prevalent for ulceration, destroys the natural elasticity of the cervix. Severe and prolonged suffering without dilatation is often the consequence. (See Chap. XXI.) Few women realize the injury done by the prevalent use of caustic treatment. One lady told me that she had been treated by eleven physicians, every one using similar measures. At last in despair she "gave up doctoring," and by hygienic methods had attained to a comfortable degree of

health. The time must come when people will protest against the burning of mucous surfaces as they now protest against blistering and bleeding, which only a few years since were universal.

The head advancing may meet with resistance from dryness, heat and rigidity of external parts.

The *hot sitz-bath* is the best temporary means to overcome rigidity of both os and vulva, and to relieve pains that are neuralgic in character. Seat the patient in a sitz-bath tub, containing very hot water, her feet also in a hot foot bath. Envelop her with blankets and increase the temperature of the water by pouring in hot water as she can bear it. Let her remain until profuse perspiration is induced. Dry her under the blankets and let her lie down without removing them. Sometimes she can remain in the bath an hour with advantage, though a shorter time is usually sufficient. The pains entirely or partially subside, and she seldom fails to fall into a refreshing sleep. Local relaxation will be accomplished, the pains assume an effective character, and a speedy termination of the case can be expected. To accomplish the desired result, the bath must be *hot*, not warm, and continued until perspiration is induced. When prolonged labor is caused by rigidity of the soft parts, good and speedy results are sure to follow. The following cases prove the value of the hot bath.

Mrs. N— engaged my services for her seventh confinement, stating that I might expect a tedious case, as in all previous labors the skill of physicians had been baffled. She had lingered in labor from 48 to 96 hours, attended with convulsions and other distressing symptoms; several times had been delivered

with instruments. Summons came for me on a bright June morning at 5 o'clock. She had had irregular pains all night, was very nervous and had great dread of her sufferings, having no hope of relief for at least two days. I found no dilatation, and pains seemed to be only false pains.

I gave her remedies, hoping to arrest the suffering until relaxation could be produced, and left her. At 10 o'clock I returned, armed with one of Dickens' novels, for a two days' pastime. Found the pains increased in severity, attended with rigidity of os, still no dilatation, but pressure of the uterus upward. Although a woman of great self-control, she could not repress the most piercing screams with each pain. A hot sitz-bath was administered, increasing the temperature until most copious perspiration was induced, after which, enveloping her in blankets, I bade her sleep, while I sat down to Dickens.

She obeyed orders, slept soundly, having contractions every fifteen minutes, when she would rouse and exclaim, "What relief!" "Heaven surely can be no sweeter than this rest!" "What a blissful change!" I would say, "Don't talk, don't bear down, sleep all you can," and still read Dickens. About one o'clock expulsive pains came on. Examination revealed full dilatation of cervix, and head advancing. At 3:30 P. M. the child was born, no spasms, no instruments, and no medicine had been required. This is only one of many that I have seen relieved in the same way, and always find the bath effectual where there is no deformity of the pelvis. I am confident that this hot bath, if generally used, would save thousands of instrumental deliveries.

Mrs. N. was a very grateful patient, and believes that the same means would have given relief in former labors, as the first symptoms were the same. The only unpleasant sequel in the case was, the novel remained unfinished.

Mrs. L——, primapara, aged thirty-three, a severe, tedious labor, with slow dilatation. Gave the hot bath with the happiest effect; patient, nurse, and all but the husband went to sleep. Contractions continued, accompanied by profuse perspiration, but for two hours did not awaken the patient. Expulsive efforts finally setting in, labor was completed in one hour. It was, however, almost immediately followed by violent hemorrhage inducing fainting. Examination revealed the placenta attached, the fibers so closely adhering to the uterus that the least attempt at removal caused the greatest suffering. The placenta was grasped and partially brought down into the cervix. By this interference the hemorrhage was arrested, and the placenta allowed to remain for about twelve hours, when it was expelled without any assistance. The patient made a rapid recovery.

At first I feared that the excessive relaxation from the bath caused the flowing, but became convinced that it was only exposure of the bloodvessels from the partial adhesion of the placenta. Its removal from the body of the womb allowed the organ to contract upon the exposed bloodvessels, and consequently the hemorrhage ceased.

The hot bath is also effectual for flagging pains that are annoying and worrying, and "seem to do no good." Iu such cases the patient takes a long rest after the bath, and real contractions and expulsive

efforts may not occur for hours or even days. This gives nature time to overcome all obstacles, and the final termination is more satisfactory.

ERGOT AND COHOSH are administered by physicians of all schools for insufficient contractions. These cause violent uterine contractions and great expulsive efforts. If the soft parts are relaxed, labor will be facilitated. If not, great injury may be done. Rupture of the uterus and laceration of the perineum are frequently the consequence. The effects after confinement are liable to be more disastrous if possible. Among these are violent hemorrhage, puerperal peritonitis which runs a rapid course, cellulitis, milk leg, nervous chills, gathered breasts, etc. These drugs are well understood to be poisonous to any one in a normal state. Surely no reason can be given why a parturient woman may hope to escape their dire effects. Without doubt they lay the foundation for many chronic uterine ailments. Please mark the following, which are only a few of the toxicological symptoms of these drugs taken by a person in health.

Ergot induces rigors, pinched, pale countenance, extreme anxiety, great fear of death, violent headache, stupor, loss of voluntary motion, spasmodic jerking, sudden paralysis, debility and fainting, cold, dry, shriveled skin, knotted veins, tongue cold, livid and pale, *vomiting violent*, enlargement and pain in the liver, watery diarrhea, swelling of the limbs with cold surface, *violent, cramp-like intermittent pains* in the pelvis and groin, hemorrhage, congestion of the womb, local gangrene.

Macrotis, or black cohosh, causes weak but rapid pulse, pains in the back with debility, rheumatic

pains in the muscles, limbs seem powerless, drawing pains with trembling, great restlessness, headache with soreness of the eyes and of the base of the brain, heat and pain in the top of the head, dimness of vision with objects floating before the eyes, prickling of the skin, cold extremities, bruised feeling all over, dizziness, loss of memory, great nervousness resulting in hysteria, vomiting, leucorrhea, hemorrhage, etc. Both of these drugs are violent in their action and poisonous in the doses usually administered in labor.

It is rare that one recovers entirely from their effects. They cause uterine inflammation, ulceration, displacement, etc., that are accompanied by amaurosis, loss of memory, headache and many nervous symptoms which are ignorantly attributed to the "last confinement." Rupture of the cervix, for which ladies so often must be treated in these days, is frequently the result of forced labor by the use of these drugs. As you value good health never take these remedies in poisonous doses. If uterine contractions can not be increased by the hot bath or cold compresses placed on the abdomen, an *attenuated* dose of the drug will be followed with as speedy results as a cup full of the infusion or a drachm of fluid extract, and the toxicological effect will be avoided.

PROTEST POSITIVELY AND PERSISTENTLY against taking a poisonous dose of ergot or black cohosh. Better wait for nature than suffer the effects that are sure to follow.

INSTRUMENTS will rarely be called in use if women learn the laws of life and obey them. Malformed and diseased as women are, instruments are resorted

to far more frequently than necessary. There is a feeling in the profession that dexterous instrumental delivery often saves women suffering, and consequent nervous prostrations. Most women, on the contrary, have a horror of forceps, and this, with the temporarily increased suffering aggravates rather than lessens the prostration. Remember, the physician has selfish temptations for instrumental interference. It entitles him to an extra fee, it saves him time, and possibly gives him *eclat* as an accoucheur.

In most cases where instruments are now used, speedy results could be obtained from the *hot sitz-bath*, without danger of subsequent difficulties. Occasionally a case may require instruments, but the experience of many successful physicians, especially the women in the profession, proves that if there is careful preparatory treatment, artificial delivery need seldom be called in requisition. In several hundred obstetric cases in my own practice, instruments were never required where the previous preparation of the patient had been under my own direction.

Women have it in their power to produce such healthful conditions that obstetrical instruments shall be known only in tradition.

CHAPTER XV.

POST PARTUM DISEASES.

"Mysterious to all thought,
A mother's prime of bliss,
When to her eager lips is brought
Her infant's thrilling kiss."

PROPER BATHING AND DIET are as essential after as before confinement. At least once a day the patient requires a bath. Ordinarily use tepid water. Sponge and dry a portion of the body at a time, keeping the balance protected. If there is heat in the back, bathe it several times a day. Should the patient be nervous and uneasy, try dry hand friction. A compress, too, is often serviceable, worn across the back for two or three hours, followed by bathing and friction. The breasts should be bathed frequently, and the colder the water the better. This prevents sensitiveness to cold, and may consequently prevent gathered breasts. Three to five days after confinement the patient can be put into a sitz-bath with benefit. Let the temperature of the water be from 85° to 95°. This bath is restful, cleansing and restorative, and is really as beneficial after as before parturition. A woman can often sit in a bath for a few moments when the same time spent in a chair would prove injurious.

Change the linen of bed and person daily, and the

napkins every three or four hours. Keep the room light and well ventilated. The temperature of the room should never exceed 70°. A few years since not a ray of light or a breath of fresh air was allowed in the parturient room, and if the woman was to touch cold water, it was deemed sure death. In some parts of this country, within twenty years, the bed even was not changed for nine days after confinement. With frequent bathing and a constant supply of fresh air, the patient will not be sensitive to cold, and inflammation and other post partum diseases will in consequence be rare.

The vagina must be syringed at least twice a day with water in which there are a few drops of carbolic acid. Use a fountain syringe, and have the patient recline over a bed pan. This will keep the parts cleansed, and the carbolic acid prevents septic poisoning. If the bowels do not move naturally by the third or fourth day, give an enema, one quart of tepid water. The regimen advised in this book having been followed, one will rarely be troubled with constipation. Beware of cathartics. Most of them have a specific action upon the uterus as well as upon the bowels, and will do harm. This is notably the case with aloes and podophyllum.

The *food* must be simple in character and easy of digestion, especially until after the milk is established. Bran or graham gruel is the *very best food* the first day or two. If it has been withheld from the diet during pregnancy, on account of containing the phosphates which have a tendency to harden the bones, it should be taken for that very purpose now.

Many are prejudiced against graham gruel, yet it

has been proven that most women relish it better than anything else after labor. In the Home of the Friendless, Leavenworth, Kan., are many cases of confinement every year. Almost universally the inmates are prejudiced against graham in any form, and rarely taste it before confinement. A former matron had been a nurse in a Water Cure. Invariably she brought a bowl of graham gruel to the mother a few hours after delivery. She never had one express any repugnance to it. On the contrary, they would say, "That tastes good;" "That goes right to the spot;" "Can any one eat too much of anything that is so good?" and similar expressions, showing that there was an actual relish for the dish. The gruel should be made thin at first, and without cream or milk.

After a few days it can be made thick like mush and eaten with fruit or cream and sugar. New milk, cracked wheat, barley, oatmeal, graham gems, fruit, etc., can be added to the diet as desired.

There is no need of milk fever. Women have been led to expect more or less constitutional disturbance accompanying the advent of the milk. With the bathing and diet recommended above, even if she has not had the best conditions during pregnancy, one hardly realizes any change in the system at that time. When patients were fed on brandy panada, wine whey, strong tea, and beef broth, were kept in unventilated rooms, deprived of water externally and internally, and besides were poisoned with drugs, it is no wonder they had milk fever, and were liable to other post partum diseases.

The child should be placed to the breast several

times a day, even if there seems to be no milk. The act of nursing stimulates secretion, prevents engorgement, and from sympathetic relation causes uterine contractions. When the breasts become filled and are knotty and tender, bathe them in hot water and have them drawn. If the child does not empty them sufficiently, the nurse or some member of the family should do it. This is better than a breast pump, and can be easily done by remembering to lap the tongue around the nipple until it meets the upper lip.

The old tradition used to be that a woman, on no account, must leave her bed before the *ninth day*. No matter how well she felt, the nine days must be spent in bed. There is no positive rule. One must be guided by her strength. Probably few women can expect to be about before four or five days. The cases where they can leave their beds earlier than that are exceptional.

MAMMARY ABSCESS, or inflammation of the breast, often called "gathered" or "bealed" breast, is usually ushered in with a chill, succeeded by feverish symptoms. Darting pains are felt in the breast which, as the disease progresses, extend to the arm-pits. The breasts swell, become hard and tender to the touch—even nursing is painful. If pus forms, the skin becomes dark red, the enlarged breast softens, accompanied by a throbbing pain. The patient is feverish, nervous, irritable, has irregular chills, night sweats, debility, etc.

Hot fomentations should be used promptly and thoroughly at the first threatening symptoms. Wring a cloth out of an infusion of phytolacca, and *keep hot* by applying the water bottle containing a small

quantity of very hot water. If too much water is put into the bottle it is made uncomfortably heavy. If the fresh root cannot be obtained, use the fluid extract, ten drops to a pint of water. Keep the breast well drawn and persevere in the hot applications; suppuration can usually be prevented. Farmers know the value of phytolacca, and use it with their new milch cows in case of caked bag.

Aconite should be taken internally if there is alternate chill and fever, with thirst and throbbing pulse, one drop of tincture in ten tablespoons of water, a spoonful every half hour.

Bryonia, 2d.—Constant aching in the bones and soreness of the flesh. Dose, six pellets every hour.

Use only liquid food until the disease is surely arrested. Keep quiet and have plenty of fresh air. Unless the suppuration is very deep the breast should never be lanced.

FOR EXCORIATED NIPPLES, bathe in a warm borax lotion, two grains to one cup of soft water; after which apply carbolated cosmoline or calenduline. If the base of the nipple is deeply cracked, before using the cosmoline, wash with a solution of nitrate of silver, one grain to two ounces of water. Protect with a shield while the child is nursing. None of the above preparations are harmful to the child, except the nitrate of silver, and the cases where this is needed are rare.

FOR INSUFFICIENT MILK, drink freely of new warm milk. Have it brought to the bed, and drink at least a pint. Take it one or two hours before breakfast. If milk cannot be obtained possessing animal warmth, take new milk, add one-tenth water, and heat over a

water bath to a temperature of 120 degrees. Cheese makers testify that the addition of water prevents rennet from coagulating the casein. In the stomach also, warm water prevents the pepsin from curdling the milk. If it is as warm as the stomach, and does not coagulate, it will be taken up by the absorbents and conveyed directly to the blood, without going through the process of digestion. Mothers who have a great aversion to milk, for the sake of the child learn to cultivate a decided relish for it.

Dr. R. P. Harris, in speaking of milk as a diet for delicate mothers, says, "Those who with ordinary food invariably fail to nurse longer than a few weeks, by this diet are capable of becoming not only good nurses, but also of gaining flesh while secreting the milk in abundance. When a delicate mother of eighty-six pounds' weight, who had failed after a month with each of three infants, is enabled by it to nurse a child eighteen months, and gain at the same time nineteen pounds, the diet must be an effective one." The article next best for promoting the secretion of milk is cocoa or chocolate, prepared with plenty of milk.

Every form of malt and spirituous liquors should by all means be *avoided*. They derange the nervous and digestive systems of both mother and babe. Custom, happily, has to a large extent done away with the idea that "nursing women *must* have ale or beer." To those who still maintain this view, I would recommend the study of the question, whether the help expected is at all commensurate with the danger incurred of a pernicious appetite being cultivated in both mother and child.

Good digestion is usually all that is essential for an abundant flow of milk. The food should be simple but nutritious. Depend upon grains and fruits mainly, and by no means exclude the bran from the wheat flour. The saline elements in the bran not only stimulate digestion, but excite the secretion of milk as well. Try the experiment of feeding an Alderney cow upon fine flour, excluding the bran. By the lack of milk you will prove that in the bran are elements pre-eminently stimulating to lacteal secretions.

Oysters eaten raw or slightly cooked are said to increase the flow of milk. Honey, too, often proves invaluable. Eat honey with bread and gems, instead of the carbonaceous butter. It stimulates all the secretions. It is evident that foods rich in phosphates are the best to increase lactiferous flow. Therefore study well the food table in Chap. IX, and partake of foods avoided in pregnancy.

In the first days after confinement, if the milk is slow to secrete, apply bruised castor bean leaves.

FOR EXCESSIVE FLOW OF MILK, once or twice a day use hot fomentations upon the breast, and apply cosmoline, in which there is a trace of camphor. Avoid salt and liquid food. Wear folds of cotton batting over the breast. In either insufficient or excessive flow of milk, guard against pressure of clothing. It is absolutely essential that the blood should circulate freely to and from the breasts.

(No one thing more frequently causes atrophied breasts in any woman than the pressure of corsets and padding ordinarily worn. It is not unusual for a fine development of the breast to result from the

removal of all pressure, accompanied by bathing daily with cold water, and following the bath by friction. Should this fail, an apparatus, on the principle of dry-cupping is used. This seldom fails of giving the desired results.)

AFTER PAINS often accompany the contraction of the uterus. It is not true that women never have them with the first child and always have them subsequently. Like most of the sufferings of maternity, they are the effect of abnormal conditions. Women, who, in two or three confinements have suffered days with after pains, threatened with spasms and getting no relief except by chlofororm, have from previous preparation recovered without a twinge of pain.

After pains usually occur periodically every ten or fifteen minutes. They are cramp-like pains accompanied by a feeling as if pricked by many needles. They make one very impatient and nervous, depriving her of needed rest. They are often the result of poisonous doses of ergot taken during labor. The *hot water bag or hot fomentations* will usually give relief. Must be very hot and kept hot, consequently dry heat is to be preferred. Administering a hot sitz-bath is also excellent treatment. If relief is not obtained, and the physician is not within call, inhale ether moderately. Do not take it internally.

THE LOCHIA is the flow from the vagina which occurs after confinement. At first it has the appearance of fresh blood, then becomes lighter in color, and finally is only a glairy mucus. This varies greatly in amount and duration. As a rule the healthier the woman, and more natural the labor, the less the flow. Cases have come to my knowledge where there

was no sanguineous flow, and the patient made a rapid recovery.

It is said that healthy squaws have no flow of blood with menstruation, or after delivery. If there is no constitutional disturbance, there need be no anxiety about a scanty flow. If caused by a chill, fever or inflammation, etc., prompt attention will be required, according to the disease.

METRORRHAGIA, or profuse flow, often requires treatment before medical aid can be secured. Hot fomentations, hot sitz-bath and hot vaginal injections are the very best applications. Recently the medical profession recognize that heat is better than cold, to arrest hemorrhage. In surgery, hot water is applied to exposed bleeding vessels. Cases are known where hot vaginal injections have instantly arrested bleeding that had resisted applications of ice, styptics and the tampon.

A lady in Michigan, during the menopause, was taken suddenly with violent hemorrhage. For seven days and nights everything was tried in vain to arrest the bleeding. She became cold and clammy, had frequent fainting spells and death seemed imminent. An old nurse came to take care of her over night. She set aside the physician's potions and applications. She filled the big wood stove with bricks, and as fast as they were heated wrapped them in wet cloths and put them about the patient, who thus obtained her first sleep for days. The hot bricks were kept to her four days and nights. There was no return of hemorrhage. She made a rapid recovery.

If there are clots, retained placenta or membranes, or any foreign growth present in the uterus, they

must be removed by surgical interference, before uterine contractions can be effected and maintained.

PELVIC PERITONITIS, PUERPERAL OR CHILD-BED FEVER. "There is a word of fear that I shall pronounce when I utter the name of Puerperal Fever; for there is almost no acute disease that is more terrible than this. The small pox itself, which reduces the fairest form of humanity to a mass of breathing corruption, can not be looked upon with greater dread. Child-bed fever, like an inexorable Atropos, cuts the thread of life for those to whom Clotho and Lachesis would give the longest span.

"There is something so touching in the death of a woman who has recently given birth to a child; something so mournful in the disappointment of cherished hopes; something so pitiful in the deserted condition of the new-born helpless creature, forever deprived of those tender cares and caresses necessary to it, that the hardest heart is not found insensible to the catastrophe. It is a sort of desecration for an accoucheé to die."

Thus feelingly writes Prof. Meigs, of Philadelphia, of this disease, the very thoughts of which strike terror to the stoutest heart. This disease is an inflammation of the uterus and its peritoneal covering, and often extends to the entire membrane lining the abdominal cavity, and possibly involves all the pelvic viscera.

The attack ordinarily commences from the third to the ninth day after delivery. Previous to this, the patient has seemed all right, when suddenly, often apparently without cause, she is taken with a chill. Rigors more or less severe extend up and

down the spinal column. Clothing does not seem to impart any warmth. Almost simultaneously with the chill, periodical pains will be felt in the womb, and if there is not much constitutional disturbance, may be taken for *after pains*. Usually, however, they are accompanied by great soreness aud tenderness in the pelvis; the abdomen soon bloats and becomes tympanitic; the legs are flexed to relieve the tension; the weight of the clothes, even, cannot be borne. The milk dries up, the lochia cease, there is headache, great thirst, increase of temperature, and a quick, wiry or bounding pulse.

All of these distressing symptoms are accompanied by great anxiety of mind and distressed expression of countenance. A dark circle forms about the eyes, which are sunken, the nose pinched, and the lips drawn, and the face is flushed or very pale. The course of this dread disease is extremely rapid. "It will not unfrequently happen that she shall die within thirty-six or forty-eight hours from the onset of the malady, and some cases terminate fatally even in eight hours. They are to be cured promptly or not at all. Such a malady as this hurries with hot and furious haste to a turn, beyond which there is not and cannot be any useful therapia."

Perhaps I shall be condemned for picturing to the sensitive imagination of the pregnant woman the possible dangers of this dread disease. Her attendants will look out for it, and she should not be led to anticipate it. For two reasons, however, she should be forewarned:

First, that she may at once summon her medical attendant.

Second, that, the causes of this disease being known, she may avoid them.

Do not delay one moment in calling your physician. Having the symptoms indicated, procrastination is suicidal. The doctor would better come ten times for a nervous chill or after-pains, if by chance the mistake should be made, than that you should fail once to notify him of an attack of puerperal fever.

Under improved methods of treatment this disease does not terminate fatally as frequently as formerly.

The causes of this disease are:

First. The inflammatory condition of the system before delivery. If the *fruit diet* has obviated this, there is nothing to fear.

Second. The use of ergot in confinement. Puerperal fever following poisoning by ergot is very rapid in its course, and soon terminates in gangrene. If this drug were banished from practice, child-bed fever would be rare.

Third. Contusions and bruises from instruments not handled dexterously cause inflammation.

Fourth. The use of cathartics, tonics, stimulants and other drugs after delivery.

It is within the power of every woman that she shall not be subject to these causes of puerperal fever.

Some late teachers claim that all child-bed fever is pyæmia, blood poisoning, and can not be avoided. Why is it, then, that it is notably absent in those who have led a hygienic life? Why is it that those physicians who insist upon preparatory treatment seldom meet with it in their practice? Others claim that the disease is contagious, and that the poison can be conveyed by physician and nurse.

Dr. W. S. Playfair, of London, who gives to this disease the name of Puerperal Septicæmia, says: "The whole tendency of recent investigations is daily rendering it more and more certain that obstetricians have been led into error by the special violence and intensity of the disease, and that they have erroneously considered it to be something special to the puerperal state, instead of recognizing in it a form of septic disease, practically identical with that which is familiar to surgeons under the name of pyæmia or septicæmia.

"If this view be correct, the term 'puerperal fever,' conveying the idea of a fever such as typhus or typhoid, must be acknowledged to be misleading, and one that should be discarded as only tending to confusion.

"According to this theory, the so-called puerperal fever is produced by the absorption of septic matter into the system. It is not essential that the poison should be peculiar or specific; for, just as in surgical pyæmia, any decomposing organic matter either originating within the generative organs of the patient herself, or coming from without, may set up this morbid action."

THE TREATMENT OF PERITONITIS should be prompt and thorough. Sweat the patient as soon as possible. Place several steaming bricks or ears of boiled corn about her. Frequent hot enemas by rectum and vagina are beneficial. If gangrene threatens, it is often arrested by the application of a yeast and charcoal poultice. Take any good lively yeast, make a sponge of corn meal and graham flour, equal parts. When light, add two tablespoons of charcoal to one

pint, put on to a large cloth covered with thin gauze, and lay over the entire abdomen. Must be changed frequently, not allowing it to get dry. An injection should be given per rectum every three hours, of weak carbolic soapsuds.

The nutriment should be diluted hot milk, or oatmeal gruel. Small pieces of ice will be grateful.

When these directions are followed faithfully, accompanied by appropriate remedies, most cases can be saved.

Even if it should be proven that this disease is septic poisoning, a healthy tone of the organs resists the absorption of the foreign agent, which proves a poison. In twenty years of general practice, I never had a fatal case outside of the hospital. My experience emphasizes what I have stated, that the hygienic life and habits, and the avoidance of drugs and instruments go far toward preventing child-bed fever.

CHAPTER XVI.

INFANTS.—THEIR CARE AT BIRTH AND DURING EARLY INFANCY.

"What am I ?
An infant crying in the night ;
An infant crying for the light ;
And with no language but a cry."

—TENNYSON.

What more helpless and dependent than the newborn infant! A human soul, with all the possibilities of life, yet of itself it cannot supply its slightest need.

No wonder that so great a wealth of maternal love is called forth in administering to such helplessness! No wonder that the mother's heart is humbled at the greatness of her mission as special guardian of the little one! May divine love and wisdom aid and guide her!

The newborn babe has had a sleep, at least a rest. It has entered upon its new life, and all the functions of the body are well established.

The first thing in lending a helping hand to the little stranger is to give him a bath. This is done ordinarily by using soap and warm water. The *vernix caseosa*, a thick, white, unctuous material that usually covers the child, and is abundant in the axilla and groin, is much more easily and thoroughly removed by cleansing it entirely with some oily substance.

For this purpose, olive oil or lard can be used. It should be applied with a soft, worn piece of flannel, keeping the child well covered. When it is entirely clean, rub all over with a fresh piece of flannel, and the skin is left in a soft, smooth condition.

R. P. Harris, M. D., says: "As the *vernix caseosa* is readily miscible with pure lard, and can be easily removed by its means, the practice prevails with many obstetricians in the United States of ordering the infant well anointed, and then wiped from head to foot with soft rags, until all the vernix disappears, and the skin retains an oily trace, not enough to soil the clothing. By this means water is avoided, and with it much risk of taking cold; the skin is left much less sensitive, after the sudden change which it is made to endure at birth than when subjected to soap and water."

DRESS THE NAVEL with absorbent antiseptic cotton. Put a piece three or four inches square on the left side of the abdomen, just above the navel, the remnant of the cord laid upon it, with its cut end pointing to the left, and upward—the cotton arranged to embrace the base of the cord, and another piece of cotton the same size placed over the cord, the whole kept in place by a soft flannel band. This is preferable to linen. It absorbs the secretion more readily, making less liability of an unpleasant odor. It is kept in place better, and the cord comes off much sooner. Can often be entirely removed the fourth day. There needs to be no grease or oil upon the cotton. After the separation of the cord, the navel should be dressed with a little simple cerate or cosmoline, and still use the absorbent cotton.

Any pouching of the navel can be relieved by using a thin slice of cork or a piece of thick pasteboard two inches in diameter. Wrap it with several thicknesses of linen and place it outside of the cotton, applying the bandage sufficiently snug to keep it in place.

THE CLOTHING of the child should be soft, warm, light, loose, and easily adjusted. Superfluous garments should be avoided, and waistbands dispensed with. Within twenty-five years mothers have made great improvement in the clothing of infants. Length of skirts is diminished, while long sleeves and high necks are substituted for short sleeves and low necked dresses.

The *shirt* is the most difficult to put on the child; it is next to impossible to keep it in place, and besides, it is entirely unnecessary. It might comfortably be relinquished altogether. Make the under skirt of soft flannel after the same pattern as the outside slip or wrapper, with long sleeves. Button it in the back. This is both shirt and skirt. Outside of this have another skirt of cotton or wool made in the same way, omitting the sleeves. Outside of these the ordinary slip or wrapper is worn. We have thus secured healthy warmth without constriction.

The *diaper* should be of linen and not pinned too tightly. Small squares of old soft linen should be used inside of the diaper the first few weeks while the skin is tender. It is well enough, too, while the child is small, to protect its clothing by laying an extra diaper unfolded inside of its clothing and possibly pinning it loosely over the hips. If the weather is cold, woolen socks are advisable from the first. In its waking hours the infant is naturally inclined to

use its limbs constantly, and the clothing should not be so long and weighty as to prevent this. Uncover its legs near the fire several times a day, and let it stretch them to its heart's content.

The *band* need not be worn after the navel has healed so as to require no dressing. Only a few years ago mothers thought the band essential until the child was six or eight months old, supposing it would prevent rupture at the navel. Every mother, however, can testify to the almost impossibility of keeping the band in place, that it is quite as likely to be found under the arms or down over the hips, as smoothly pinned around the abdomen. Besides, if kept in place the very pressure of the band weakens the muscles of the abdomen, rendering rupture more liable than if not worn. It serves no purpose save to keep in place the dressing upon the navel, and when that is no longer needed the child is better off without it. (The best band is knitted out of soft wool using some of the modern elastic stitches. This can be made entire and drawn on over the feet.)

HABITS OF CLEANLINESS can be taught every child. The clumsy diaper can be dispensed with by the time it is three or four months old. Let the mother practice holding out her baby immediately after nursing it, and it will easily be taught to urinate at this time, and also to have a passage from the bowels at a stated time in the morning and evening. The actual comfort secured to mother and child through this habit, more than repays for the labor and patience in securing it. Teach your children to be cleanly. *A dirty child is a mother's disgrace.* When a child begins to creep and walk, the diaper (necessarily large

and bulky) has to be pinned too tightly for comfort and health, in order to keep it in place.

The bones being pliable, this compression of the ribs and spreading of the thighs often produces actual deformity. A mother will never regret taking a little trouble at the beginning, and, by so doing, can establish habits of regularity and cleanliness in the little one.

"The first week of the child's life it should not be entirely stripped and washed; it is too fatiguing. It must of course be kept sweet and clean, which can be done gently, part by part. A very scientific successful man midwife in South Brooklyn will not allow a newborn infant to be washed and dressed till it is twenty-four hours old. He oils it well and rolls it in warm, soft wraps, with face only open, puts it to the breast, and orders it to be kept quiet and warm till the second day, when, if the child is vigorous, he allows it to be handled and dressed as the nurse desires; if not quite strong and rested, he will not subject it to dressing until a week old."

After the babe is a week old, it can be bathed every day or every other day. By the time it is two months old, it can be put into a bath daily. Should remain in the water not more than five minutes. The temperature should not exceed 90°, and it is quite as well to accustom the child to a lower temperature gradually. Don't trust the hand to determine the heat. *Always have a thermometer.* Do not bathe a child immediately after nursing. Avoid the use of soap. A child's skin is naturally oily, and should be preserved so.

NURSING.

"The starting beverage meets the thirsty lip;
'Tis joy to yield it, and 'tis joy to sip."

The newborn infant needs no artificial food. It should be put to the breast whenever it shows an inclination.

The true mother will delight in the privilege of nursing her child, and will allow nothing but the most entire inability to prevent the exercise of this maternal office.

The mother's milk is the natural food and nothing can fully take its place. Every means should be used to secure and maintain this natural nutriment before resorting to artificial food. The nursing process, by sympathetic action, assists in restoring the uterus to normal conditions. A few years since everybody supposed the baby must be fed artificially the first two days of its life, that there was a break in nature's provision for its sustenance. The consequence was the poor little victim was dosed with all sorts of slops, catnip tea, panada, gruel, cracker water, cream tea, etc., etc. Remember, it *needs nothing* but the secretion that is in the breast, which is laxative at first and removes the meconium from the bowels. If for any reason the mother has not milk for her child, or is separated from it, the best substitute is a wet nurse, whose babe should be near the same age. The nurse should be well and strong, having abundant and nourishing milk.

THE BEST ARTIFICIAL FOOD is cream reduced and sweetened with sugar of milk. Analyses show that

the human milk contains more cream and sugar and less casein than the milk of animals. The reduced cream, sweetened, closely approximates human milk. The difference in the quality of cream presents a great difficulty. No rule can be given for its reduction. Most nurses leave it too rich, and the child's system is soon deranged.

To obviate this difficulty, let new milk stand from four to six hours, take the top off, reduce one-half with hot water, to one pint add one teaspoonful of sugar of milk and one grain of phosphate of lime. When the child is from three to five months old, oatmeal, barley, or bran gruel can be added.

Children have not sufficient secretion of saliva to convert starch into sugar. Therefore, never use arrowroot, corn starch, or flour; these do not digest in the stomach and intestinal derangement is sure to follow. Bran or barley gruel furnishes phosphates, which are essential to stimulate digestion.

Microscopical examination of the artificial foods prepared and sold for infants, proves many of them deficient in gluten and too abundant in starch to make them desirable nutriment. The following extract from "Playfair's Midwifery" explains the

"CAUSES OF MORTALITY IN HAND-FED CHILDREN.—Much of the mortality following hand-feeding may be traced to unsuitable food. Among the poorer classes especially there is a prevalent notion that milk alone is insufficient; and hence the almost universal custom of administering various farinaceous foods, such as corn-flour or arrowroot, even from the earliest period. Many of these consist of starch alone, and are therefore absolutely unsuited for form-

ing the staple of diet, on account of the total absence of nitrogenous elements. Independently of this, it has been shown that the saliva of infants has not the same digestive action on starch that it subsequently acquires, and this affords a further explanation of its so constantly producing intestinal derangement. Reason, as well as experience, abundantly proves that the object to be aimed at in hand-feeding is to imitate as nearly as possible the food which nature supplies for the newborn child, and therefore the obvious course is to use milk from some animal, so treated as to make it resemble human milk as nearly as may be.

"ARTIFICIAL HUMAN MILK.—An admirable plan of treating cow's milk, so as to reduce it to almost absolute chemical identity with human milk has been devised by Professor Frankland to whom I am indebted for permission to insert the recipe. I have followed this method in many cases, and find it far superior to the usual one, as it produces an exact and uniform compound. With a little practice nurses can employ it with no more trouble than the ordinary mixing of cow's milk with water and sugar. The following extracts from Dr. Frankland's work will explain the principles on which the preparation of the artificial human milk is founded: 'The rearing of infants, who can not be supplied with their natural food, is notoriously difficult and uncertain, owing chiefly to the great difference in the chemical composition of human milk and cow's milk. The latter is much richer in casein, and poorer in milk-sugar than the former, whilst asses' milk, which is sometimes used for feeding infants, is too poor in casein and butter, although the proportion of sugar is nearly the same

as in human milk. The relations of the three kinds of milk to each other are clearly seen from the following analytical numbers, which express the percentage amounts of the different constituents:

	Woman.	Ass.	Cow.
Casein	2.7	1.7	4.2
Butter	3.5	1.3	3.8
Milk-sugar	5.0	4.5	3.8
Salts	.2	.5	.7

These numbers show that by the removal of one-third of the casein from cow's milk and the addition of about one-third more milk-sugar a liquid is obtained which closely approaches human milk in composition, the percentage amounts of the four chief constituents being as follows:

Casein	2.8
Butter	3.8
Milk-sugar	5.0
Salts	.7

The following is the mode of preparing the milk: Allow one-third of a pint of new milk to stand for about twelve hours, remove the cream and add to it two-thirds of a pint of new milk, as fresh from the cow as possible. Into the one-third of a pint of blue milk left after the abstraction of the cream, put a piece of rennet about one inch square. Set the vessel in warm water, until the milk is fully curdled, an operation requiring from five to fifteen minutes, according to the activity of the rennet, which should be removed as soon as the curdling commences, and put into an egg cup for use on subsequent occasions,

as it may be employed daily for a month or two. Break up the curd repeatedly, and carefully separate the whole of the whey, which should then be rapidly heated to boiling in a small tin pan placed over a spirit or gas lamp. During the heating a further quantity of casein, technically called 'fleetings,' separates, and must be removed by straining through muslin. Now dissolve 110 grains of powdered sugar of milk in the hot whey, and mix it with the two-thirds of a pint of new milk to which the cream from the other third of a pint was added as already described. The artificial milk should be used within twelve hours of its preparation, and it is almost needless to add that all the vessels employed in its manufacture and administration should be kept scrupulously clean."

"Never give the child the rubber nipple nursing bottle, especially the white rubber, since it contains in its composition the carbonate of lead, which is sure poison—sometimes slow, but none the less sure. I have watched the effects of the white rubber nipple for many years; have known cases of spinal curvature, one of complete humpback, often decayed teeth, innumerable cases of sore mouth, and dysentery or diarrhea, many times causing death, large indolent boils on the scalp, eruptions behind the ears and in the folds of the neck, in consequence of sucking the rubber nipple. All rubber gum rings and toys should be avoided, indeed, I wish everything made from the white rubber could be banished from the nursery. Any babe can be fed at first with a spoon and in a few weeks it will drink from a cup or glass. If any artificial nipple must be used, one of silver, glass or

porcelain can be procured. The black rubber may not be as objectionable as the white. I have known a very good artificial nipple to be made of fine sponge, with cambric linen covering it. A small quill stitched in thoroughly is passed through the center nearly to the cover, and fitting the sponge over the top of a small sized bottle, it answers a good purpose. The vessel and tubes of nursing bottles can hardly be kept clean. This is an additional plea for teaching a child that must be fed, to drink from a cup."*

A young babe should not be fed more frequently than once in two hours, and by the time it is three months old once in three hours is preferable. Nothing deranges a child's digestion more than irregular and constant nursing. I have seen a mother give her child the breast five times during a half hour's conversation. It is such an unreasonable fallacy to suppose that a child is hungry every time it nestles and frets. Consider the time since it has nursed and look for other causes of uneasiness before giving it the breast.

A babe should be weaned when it is from twelve to eighteen months old. The exact time depends largely upon its development, and also upon the mother's condition. Let the weaning be entire and at once. Be sure that you have chosen the right time, then undertake it with resolution and carry it on vigorously. Adopt no half-way measures. Let the child have a drink of water before going to sleep, then give *nothing* to eat or drink during the night. Before weaning and for sometime after, it should be

*"Care of Children," Dr. Clemence S. Lozier.

fed upon oatmeal, barley meal, wheat meal, graham bread and milk, wheatlet, etc. The digestive organs are not in a condition for a mixed diet until the teeth are developed, and, as has been indicated above, the saliva is not yet an efficient aid for digesting potatoes and other starchy food. Many a case of summer complaint, diphtheria, convulsions, etc., is due to the meat, pie and cake upon which the child has been fed, poisoning instead of nourishing the system.

This is not all. Meat fed children are cross, irritable and quarrelsome. Some three years since a kind, conscientious mother said: "The greatest trial of my life is that my children quarrel so with each other. I can not understand the reason. Nothing they do annoys me so much, and by teaching, persuasion or punishment I have been unable to change their habit."

Hoping to give her aid, I asked many questions—among other things in regard to diet. She told me they were great meat eaters—her husband and brother must have it three times a day, and the children often ate scarcely anything else. I told her the story of the bear that was kept at the museum in Giessen; when fed on bread only, it was quiet and tractable—even children could play with it with impunity—but a few day's feeding upon meat would make it ferocious, quarrelsome and dangerous.

She agreed to try the experiment upon her children. I counseled her, as her husband did not dine at home, to make a special dinner for the children. Instead of giving them scraps of cold meat, pies and cake, etc., make them milk toast, tiny graham or corn meal gems, cracked wheat or wheatlet moulded in

small cups with fruit sauce, fruit puddings, etc. Spare no pains in making it attractive and palatable. Decorate the table with fruit and flowers, and make the occasions frequent when their own holiday presents of china should be used. Follow this with a light lunch at night, of simple, farinaceous food before the ordinary family dinner. In this way they would be tempted with the meat only at breakfast, and even then, fresh fish, fish balls, omelets, etc., might often be made to supplant the platter of steak or ham.

This lady entered into the plan heartily, and although it required study, tact and perseverance, she was more than amply paid. In less than a month she could see a difference in the habits of her children, and a year later she testified that it would hardly be recognized as the same family. The children were cheerful, playful, gleeful, and full of spirit—but in place of fretfulness and quarrels, were kind, benevolent and considerate to each other. They were also more than ordinarily exempt from acute attacks of fevers and inflammation.

CHAPTER XVII.

DISEASES OF INFANTS.

The diseases herein treated are mainly those for which a physician is seldom called. A few suggestions are also added upon those in which the severity of the attack necessitates attention before medical aid can be obtained.

APHTHA is sometimes the result of scrofula, otherwise it is caused by improper quality or quantity of food, either natural or artificial. In bottle-fed babes it often results from the milk not being sufficiently diluted, or from the use of starchy food. Neglect of general cleanliness in many cases gives rise to this ailment. The child is feverish, fretful, and often refuses the breast on account of pain experienced in nursing. Sometimes there is vomiting and thin watery diarrhea. The tongue, gums, palate and inside of cheeks and lips are thickly specked with white flecks; sometimes there is a continuous dirty diphtheritic-like membrane. Aphtha usually runs its course in a few days. Those cases are exceptional which are followed by unpleasant results.

TREATMENT.—Sometimes the case requires merely the washing of the mouth two or three times a day with a weak solution of borax, ten grains to one ounce of water. The mouth should be cleansed after each meal as should also the mother's nipple.

℞ Hydrastis 10 gr.
Sugar 100 gr.

Pulverize thoroughly and put a small quantity into the mouth two or three times a day.

Arsenicum, 3*d*.—Patches of a dark color; severe, watery, painless diarrhea, thirst and great prostration. Dose, six pellets every three hours.

Merc. Sol., 3*d*.—Dribbling saliva, offensive breath, greenish diarrhea with pain. Dose, six pellets every four hours.

EXCORIATION of groin and axilla frequently troubles very fat, scrofulous or bottle-fed babies. The surface becomes raw, inflamed, and often painful.

Bathe frequently in tepid soft water, or what often proves better, milk and water. Dry with a soft linen cloth. Or hold the sufferer over a tub or basin, and from a large sponge squeeze tepid soft water on the affected part. Repeat every two or three hours. This is grateful and healing. The occasional use of cosmoline or of sweet cream in which clover blossoms have been steeped is beneficial. Avoid nursery powders. If the methods advised fail, scorch flour and apply several times a day. Should there be eruptions or ulcers use a powder of the following:

℞ Scorched Flour ℥j
Powdered Hydrastis ʒj

Mix. Apply through a powder bag after washing.

Borax, half a drachm to a pint of soft water, gives relief where great inflammation attends the excoriation. Lay upon the affected part for an hour or two at a time soft cloths wet in the cold lotion. Frequent

washing and perfect cleanliness are really the best preventives and cure.

COLIC is the torture of babyhood, as well as a constant source of parental solicitude. It is not considered a dangerous disease, but the sufferings of the little one are a great tax upon sympathetic nerves. There is no special age when the infant is subject to colic. It occurs more frequently when it is from two to five months old. However, children may suffer from it before they are two weeks old.

Severe colics are usually the result of derangements of the liver, and when mothers are badly nourished, the child is frequently born with the trouble. The condition is largely due to a deficiency of nitrogenous elements and phosphates in the food. The system is over supplied with carbonates in the shape of starch, fats and sugar, and deficient in elements that build up the tissues, such as gluten, fibrin, albumen, etc. The mother partakes of food that produces an inflammatory condition, and lacks in that which makes muscle, bone and nerve. She should be cautious about eating of mixed dishes and also of greasy and highly seasoned food.

Let her diet be chiefly of barley, wheatlet, rolled wheat, and bread from graham flour, or Lockport entire wheat flour, with the addition of fish, milk and eggs. Fruits can be partaken of freely, avoiding those that are exceedingly acid. It is only when fruit is not eaten all the time, that colic in the child is caused by the mother's partaking of it. If it has been eaten freely during pregnancy, it will do no harm during lactation. Until the causes of colic can be removed, palliative treatment must be resorted to.

A colicky baby must be kept warm, avoiding all changes in temperature.* A rubber bag or bottle filled with hot water and put in the crib will keep the child, once quieted, asleep for hours. During the paroxysms put the child's feet in a basin of hot water, or place cloths wrung from hot water over its bowels, and if the attack is very severe, a full hot bath will often give relief.†

Avoid giving opiates. They constipate the bowels and derange digestion. In acute attacks following their use, the brain and spine are likely to be seriously involved. Nearly all cordials sold for colic contain opium. Analysis reveals morphine, one grain to the ounce, in Winslow's soothing syrup.

The following from a daily paper only shows that many medicines are the mother's enemy, instead of the "Mother's Friend." "The Tewksbury almshouse horror once more calls attention to the frightful abuse of narcotics for which the medical profession is to a great extent responsible. In the Tewksbury child's hospital the nurses were provided with morphine in half-pint bottles! No wonder the babies were kept so still that they died at a rate never before

*An interesting account has lately appeared in medical journals entitled, "Incubating Babies." Some physician had charge of foundlings and tried the experiment of keeping them devoid of clothing in ventilated boxes at an even temperature of 80°. They were fed at regular intervals. They slept most of the time. During the waking periods, kicked, laughed and crowed, but seldom cried. He lessened the mortality very greatly and possibly proved to the world that the *hardening* or toughening process is begun too soon for the best vigor of childhood.

†A warm bath, indeed, let the cause of "griping" be what it may, usually affords instant relief.—*Chevasse.*

heard of. An idea of the extent to which narcotics are given to infants in English manufacturing towns is gleanable from the deposition of a Hanley chemist before a coroner's jury. He testified that he made up and sold six gallons a day of an article called 'Mother's Friend.' The stuff contains seven and one-half drops of laudanum to the ounce. With this it is customary to dose their babies so that they shall sleep during the time the young mothers are engaged at the factories. Of course the infant mortality of the place is frightful.

"In contradistinction to this practice of barbarously working young mothers, Mr. Schneider, the owner of the great Creuzot iron works in France, compels a mother to stay from work for a few months before and after a child is born. For the carrying out of this humane purpose he has created a fund out of which the wages of the mother during the period of her incapacity are paid."

Convulsions, brain fever, summer complaint, etc., are often the result of the early use of opiates. I can recall many cases where spasms in summer complaint were caused evidently and directly by the use of opiates employed to check a slight ailment, in itself harmless.

FOR COLIC.—Some diffusible stimulant is preferable to narcotics. In mild cases, a few tea-spoonfuls of hot water suffice, and there is but little objection to the old-fashioned catnip tea.

Peppermint essence.—One drop in six tea-spoons of hot water often affords relief. Feed slowly.

Camphor, tincture.—Pain is severe and cramp-like, knees flexed, hands and feet cold, face livid, especially

if there is diarrhea; put one drop on a tea-spoonful of sugar, mix thoroughly, then add six tea-spoons of hot water. Dose—A tea-spoonful every ten minutes.

Chamomilla, 2*d*.—Stools are green and every diaper is stained. The child is very restless, nurses often, constantly desires change of position and attendants, wants to be carried from room to room. If the homeopathic preparation does not give relief, make an infusion of the blossoms. To six grains of the bloom, pour one gill boiling water. Feed slowly. Four or five tea-spoonfuls are usually sufficient. Any of these preparations, except camphor, should not be sweetened.

Nux Vomica, 3*d*.—Constipation or undigested curds of milk in the feces. Child starts in its sleep, has short naps and throws its head back when it cries. To one grain add six tea-spoons of warm water, and give every ten minutes in half tea-spoonful doses. For colic of children and grown people, I have found more frequent relief from this remedy than all others. It promotes digestion, equalizes the circulation, and feeds the nervous system. The mother should also take it once or twice a day when the child has these symptoms, and an occasional dose taken by both, prevents subsequent attacks. She must remember, too, to take sufficient rest and sleep, using every means to promote her own best health.

CONSTIPATION is not a very frequent ailment of infants, but is occasionally met with and sometimes becomes very obstinate. When a nursing child is thus affected, the mother will usually be found to be suffering from the same condition. In such a case, she should follow the directions in Chap. V, and

through correct habits in her own system she will doubtless find the child relieved.

Want of regularity in its habits often produces costiveness in an infant. If he is fed or nursed regularly, and held out at the same time of each day, and as he gets older is put upon a chair, he will seldom be troubled with this complaint. It is wonderful how soon the bowels in most cases, by this simple plan, may be brought into a regular habit.

A soap suppository should be used after a day or two, if this method fails. This is a safe, speedy and certain method of moving the bowels. Make it by paring a piece of white castile soap round. Should be about the size of a lead-pencil, pointed at the end, and two inches in length. Moisten in warm water and introduce nearly the whole length. After remaining from one to five minutes it will be expelled and the bowels will be comfortably and effectually relieved.

If the feces are very hard like little balls, it is better to give an enema of castile soapsuds, to one cupful of which, one tea-spoonful of sweet oil has been added. Squeezing cold or tepid water over the child's bowels, followed by hand friction, aids to stimulate them to action.

Some advise rubbing the bowels with castor oil, getting thereby the aperient effect without the irritation of an internal dose.

Do not begin giving a little baby aperient drugs. Chevasse says, "If you once begin, and continue it for a while, opening medicine becomes a dire necessity, and then woe betide the poor unfortunate child."

Purgative medicines irritate beyond measure the

tender organs of an infant and ordinarily result in constipation.

DIARRHEA of infants is nature's first method of removing obstructions and overcoming derangements of the system, and in nine cases out of ten should not be interfered with.

The natural movements are usually thin, and of bright orange color. One author describes them as being of the "consistence and color of mustard mixed for the table." They are nearly devoid of smell, or at least have only a faint, disagreeable odor. Many children at first have from three to six movements in a day. If they should increase to from six to twelve and still not change materially in consistence color or odor, there is no cause for uneasiness.

Many an attack of sickness is the result of checking a diarrhea with opiates and astringents. If the discharges become watery, green, attended with griping, or streaked with mucus or blood, are of an ashen or chalk color, or if they have undigested curds of milk, then they demand attention. Above all, keep the child quiet and apply heat. The hot water bottle is most excellent. An enema of hot water often gives entire relief without the use of other remedies. I have known large families of children, in which for years no other means was used for the successful control of this disease.

DYSENTERY is indicated by mucus and blood with straining. It is an inflammation of the rectum and large intestines. Warm flaxseed tea injections after the discharge give great relief. Compresses should be put on the bowels for an hour or two at a time, three or four times a day.

A general pack is exceedingly helpful where fever attends this or other affections.

To pack a child, remove all its clothing, put on its nightdress, lay in the crib on a woolen blanket: wet the nightdress with tepid water, using a sponge; put a hot bottle to the feet.

Wrap the child closely in the blanket and be sure reaction takes place. Let it lie in this one hour, when it should be sponged carefully and wiped dry. This pack is indicated in any disease of children where there is sufficient fever and heat to produce reaction. Remember, the simplest measures are often the most effectual. (The above suggestions are equally valuable in giving packs to adults.)

SUMMER COMPLAINT is an inflammation or irritation of the mucous membrane of the intestines, and by some is called intestinal catarrh. Owing to dentition and change of food, children are more liable to this affection in their second summer. They are then constantly the subject of anxious solicitude by their parents and friends.

If the discharges are only frequent and yellow, unaccompanied by pain and fever, there is no cause for anxiety. It is simply an effort of nature to restore normal conditions, and should not be interfered with. Too hastily checking this diarrhea is frequently the cause of disease.

The symptoms of summer complaint proper, are frequent, watery movements; at first may be green but soon become gray, brown and frothy, sometimes having a mixture of phlegm and mucus; frequently are fetid, and, at times contain undigested food. It may or may not be accompanied by pain. Nausea

and vomiting are frequent symptoms, and if severe, constitute cholera infantum. The surface of the body is cold, often in a cold perspiration, while the soles of the feet and palms of the hands are dry and hot. It is usually attended with great thirst, a quick pulse and increased temperature.

Some children are prostrated at once by the attack, losing flesh and strength rapidly, while others keep about many days. Appetite fails, or else there are morbid cravings, often for the very things that increase the irritation. If the disease is not abated, the fever and thirst increase, the tongue becomes dry and brown, pulse is more rapid, the strength fails, great restlessness ensues, the brain becomes affected, coma ensues, and death closes the scene.

Impure air and improper diet are the principal causes of this disease. Sleeping and living rooms not being sufficiently ventilated, the blood becomes poisoned. Children are fed a mixed diet too soon. Rich and highly seasoned food that is even unsuitable for adults, except in a vigorous outdoor life, is given them, and at irregular hours. The delicate organs are overtaxed, and inflammatory conditions produced. When a child is weaned it should be fed upon oat, wheat and corn meal mush, bread and milk, rice, cracked wheat, wheatlet, barley, and ripe fruits. Meats, condiments, tea and coffee, and food containing fats should be avoided. Even most of the vegetables are not adapted to children.

Give them simple but nutritious diet, turn them, like colts, outdoors to run and play, and you will save yourselves anxiety, save doctors' bills, and best of all, save your children. Blood that is too carbo-

naceous can be oxygenized by plenty of outdoor exercise, both by adults and children. The less clothing a child wears in hot weather the better, only I would advise that flannel be worn next the skin. This will prevent sudden checking of perspiration. By all means let the little children go barefoot. A child that has a sand pile to play in, and is allowed to run barefoot, must be of a very delicate organization if he can have summer complaint. By direct contact with the earth, superabundance of electricity is carried off, and thus is lessened the possibility of inflammation. *The child that spends most of its waking hours outdoors, barefooted, seldom gets summer complaint.* He has:

> "Sleep that wakes in laughing day;
> Health that mocks the doctors' rules;
> Outward sunshine; inward joy;
> Blessings on thee, barefoot boy!"

In summer complaint, give but little food, and that only in a liquid form. Barley water, rice water, oatmeal gruel, bran jelly, lemon jelly and orange whey, are all good. Milk can be used, if relished and digested. It is ordinarily better to be reduced by adding one-third boiling water. All of these must be given in small quantities and at regular intervals. The best drink is soft water. If there is vomiting, a drink made by steeping whole parched corn, is excellent. Also oatmeal coffee is good. The juice of acid fruits is beneficial, and can be used freely. But on no account allow the pulp, seeds or skin to be eaten. Remember, very little nourishment can be appropriated. The child often takes food on account of thirst.

A COMPRESS wrung from cold water should be applied if there is local heat, and allowed to remain for two or three hours, then removed, and the parts bathed in tepid water. If there is pain, hot fomentations or hot enemas, will be advantageous.

Under all circumstances avoid opiates and astringents. These stop the discharges without removing the cause, and if the disease does not recur in the same form, some other organ is liable to become affected. If the child seems to need nourishment and is not able to take it, an enema of a thin bran tea will prove nourishing without being irritating.

Keep the child quiet, in a well ventilated room, or in the open air. A bed made of the inside corn husks stripped fine, is the best. A new material for bedding made of Florida moss is excellent. A child, sick or well, should not sleep on bed or pillows of feathers. By observing these simple directions, most cases of this dread disease can be saved.

REMEDIES for dysentery and summer complaint.

Arsenicum, 3*d*.—The discharges are thin, watery, yellow, accompanied by thirst, hands and feet hot. Six pellets every two hours.

Cuprum, 3*d*.—Discharges green, frequent and small, with much pain. Six pellets every two hours.

Camphor tincture. — Discharges watery, frequent vomiting, coldness of extremities. Prepared and given as on page 221.

Mercury sol., 3*d*.—Discharges watery, gush out, followed by sinking, have a bad odor. Six pellets every three hours.

Mercury cor., 3*d*.—Green discharges streaked with mucus or blood, accompanied by straining effort. Six pellets every four hours.

Veratrum Viride, 3*d*. — Coldness of extremities, head hot, thirst, nausea, vomiting. Six pellets every two hours.

Phosphorus, 3*d*.—Odorless, clay colored discharges. Four pellets every hour.

INFLAMMATION OF THE BOWELS is inflammation of the intestines, involving either all their coats or only their mucous lining. The symptoms are rigors, followed by dry, hot skin; quick, wiry, strong pulse; thirst, nausea or vomiting, diarrhea or constipation; severe pain in the abdomen, especially around the navel, aggravated by pressure. Lies on his back with his knees drawn up.

Causes.—Errors in diet, cold, use of drugs, especially of purgatives and strong medicines used to check diarrhea. Remember what is said of diarrhea on page 224, and do not be in haste to check the first symptoms. Use liquid food only. It is seldom necessary to give remedies.

Hot fomentations alternated with *cold compresses* carefully adjusted, will prove very efficacious. *Hot enemas* should also be given.

DENTITION, under natural and proper conditions should not be accompanied by constitutional disturbances. Some law must have been violated to have caused derangements with teething.

The symptoms of the disorders of dentition are hot, swollen gums, accompanied by feverishness and restlessness, starting, as if in fright, or interrupted sleep, increased flow of saliva, various eruptions on the head or body, derangements of the digestive organs. Summer complaint is the most frequent of the ailments peculiar to teething, which see page 225.

The most prevalent and serious cause for these ailments is to be found in the adoption of a mixed diet at too early an age. A teething infant cannot with impunity be thus fed. This is sufficiently proved by the lack of a full complement of teeth needful for mastication. Disturbed conditions of the mother, as worry, anger, over-heating, and fatigue often result in serious effects on the nursing child.

Let the gums be bathed frequently in cold water. Lancing is seldom necessary.

Starchy foods and sweets should be avoided. It has been proven that the love for sweets often manifested by children is an unnatural appetite. It is doing injury to the teething infant to cultivate this taste by universally sweetening its food. Supplement the milk diet with graham mush, wheatlet, granula, or bread of the fine flour of the entire wheat.

Keep the child much in the open air. See that the head is cool and the feet warm. Bathe daily in cold water, and keep a flannel band or shirt about the abdomen.

Chamomilla, 2d.—An excellent medicine for most cases of disordered dentition, especially in the absence of fever. Also, when there is bilious purging, intestinal irritation, cough, nervousness and fretfulness. Six pellets every hour.

Aconitum, 2d.—Feverishness, restlessness, inflamed gums. Ten drops in half a glass of water, teaspoonful every half hour. A cloth wet in this preparation given to a child to hold in its mouth will alleviate heat and pain in the gums, and will be highly appreciated by the little one.

Calcarea Carb., 3*d.*—Slimy diarrhea in scrofulous patients. Six pellets every three hours.

Arsenicum. 3*d.*—Thirst, hot hands and feet, great emaciation. Six pellets every hour.

Bell., 3*d.*—Flushed face, nervous irritability, uneasiness in sleep. Six pellets every hour.

Pod. 2*d.*—Diarrhea with pain of an intermitting character, prolapsus ani. Six pellets every three hours.

Silicea, 6*th.*—Perspiration about the head upon falling asleep. Six pellets three times a day.

CHAPTER XVIII.

DISEASES OF INFANTS.—CONTINUED.

WORMS.—*Thread or pin-worms*, and *round-worms* are most common. *Thread-worms* are about half an inch in length, white in color, and move rapidly. They are found in the anus or lower part of the rectum.

Thread-worms give rise to restlessness and itching about the anus, especially in the evening after first falling asleep. Give with a child's syringe a small injection of a tablespoonful of raw linseed oil. In some instances anointing externally with the oil or with cosmoline will give relief. Keep the parts well cleansed, using suds of carbolic soap. The *round-worm* is from six to fifteen inches long, resembling the common earth-worm, but of a paler color. It is supposed to feed on the chyle and lives generally in the small intestines; but it sometimes passes upward into the stomach and is expelled by vomiting, or downward and is ejected with the evacuations.

The presence of the round-worm may be indicated by indigestion, swelling of the abdomen, restlessness, grinding of the teeth in sleep, convulsion, etc. It is the result of a mixed diet, and is rarely found when the child has been fed on the product of the grains.

Santonine, 1*st*.—Grain doses, three times a day for three days. Follow this on the fourth day by a copious enema, one pint of water, to which one tea-spoon

of salt has been added. After three days, if the symptoms still continue, repeat treatment.

INCONTINENCE OF URINE.—This annoying ailment is common among children. Mothers and nurses often deal impatiently with the unfortunate child, believing it to be a *habit*, which may be easily overcome. It is more often a malady than a habit. In neither case is it ever cured by scolding. If a habit, a promised reward is more effective than harsh treatment. Give the child a light supper devoid of liquids. Take him up once or twice in the night to urinate. Bathe the spine at bedtime with equal parts of alcohol and ammonia, followed by hand friction.

RETENTION OF URINE.—The child is restless, uneasy and unable to pass water, beyond perhaps a small quantity, though there is frequent urging. It may be caused by cold, injuries or acute disease. *A full hot bath, or hot fomentations* nearly always produce relief.

Aconitum, 3*d*.—Retention from cold, fever, or inflammation, hot, dry skin, thirst, etc.

Cantharis, 3*d*.—Frequent urging with total suppression; or the discharge, with pain, of a few drops of bloody urine.

CROUP is liable to attack a child any time from the age of one month, until nine or ten years old. The attacks occur most frequently when about two or three years of age. Nothing will more quickly make a mother's heart stand still with alarm and terror than to hear the hoarse, whistling, sonorous breathing of croup. A few directions will be of service until medical attendance can be obtained.

Authors recognize two varieties, the spasmodic and membranous, and recently some speak of diph

theritic croup. In the first, the inflammation does not run so high, and the hoarseness may be simply nervous. It runs its course rapidly. Usually the child goes to bed all right, and awakens about 11 or 12 o'clock, with a loud ringing or rasping cough, and some difficulty of breathing. This attack relieved, will seem all right through the following day, unless an occasional cough. Usually recurs three or four successive nights, is seldom fatal.

In *membranous croup*, there may be slight hoarseness and difficulty of breathing several days before the attack becomes severe. The mucous membrane of the throat becomes red and inflamed, with a thick, ropy exudation that forms in a membrane, covering the entire fauces. Fever may or may not be present. Symptoms remain much the same day and night. Duration of the disease from two to fourteen days.

The following are a few of the symptoms to aid in distinguishing between the different forms of croup.

TRUE OR MEMBRANOUS CROUP.	FALSE OR SPASMODIC CROUP.
Begins any time.	Begins from ten to twelve o'clock at night.
First symptoms catarrhal.	Severe at first.
Symptoms slight at first.	Cough loud and ringing.
Cough harsh and rough.	Voice hoarse.
Voice weak, whispers.	No membrane.
Membrane always visible.	DIPHTHERIA.
No fetor.	Fetid breath.
Membrane lies upon mucous membrane, is loose, and can be removed easily.	Membrane dips down in the mucous membrane.
Membrane invades the larynx from below and progresses upward. Membrane always continuous and glairy.	Is tenacious, firm, adherent. Membrane invades the larynx from above and progresses downward, and often is seen in patches.

Many cases of spasmodic croup are relieved entirely by using promptly a compress of ice cold water; should be worn day and night, and kept well covered with a woolen cloth. Apply to the throat only. Renew in one or two hours, if the first application does not give relief. Many families for croup never resort to any other means, feeling confident that this will give certain relief.

The following remedy I have used for years with the happiest result. Families that have croupy children keep it in the house, and I seldom have to be called out at night for croup by regular patrons. It can be put up at any homeopathic pharmacy. Do not try to get it at the drugstore, as the ordinary drug clerk has no inkling of homeopathic trituration.

℞ Tartar Emetic, 2d trit. ʒij
Aconite Tincture, gtts. ij

Mix. Dry out, triturate half an hour. Put six grains in twelve tea-spoons of water, and give in tea-spoonful doses every ten or fifteen minutes. It is not necessary that the emetic effect of the drug should be secured. It has a specific action upon the air passages, and is an invaluable remedy in many of the acute affections of throat and lungs. *Aconite* alone gives relief frequently, and many physicians use no other remedy. The two together in the above preparation have seldom failed me, and as an old friend I recommend it. During the day following the attack give a tea spoonful of the remedy once in two hours. Keep the child on a light diet and free from exposure.

In membranous or diphtheritic croup, the services of a physician will always be secured if possible.

Proto-iodide of mercury is my "sheet anchor" for both these affections. Of this I give the second trituration in grain doses every two hours. Often give the prescription recommended for spasmodic croup at the same time, a tea-spoonful every twenty or thirty minutes. Other remedies, such as *iodine, bromine, nitrate of amyl, bichromate of potassa, phosphorus*, etc., are used as the symptoms indicate; but the *proto-iodide* or *bin-iodide* of mercury will meet the exigencies of more cases than any other one known remedy. Of course hot baths, hot fomentations and cold compresses must be brought into requisition. I have seen great relief even where the disease seemed in the last stages from a poultice of fresh phytolacca, (pokeroot) applied to the throat. This is made by pounding the root and mixing it with hot flaxseed or meal poultice. Not being able to procure the root, fluid extract can be used.

DIPHTHERIA is now considered an infectious disease, produced by bacteria or infusoria that inoculate the patient. Many claim to be able to cure the disease by local means only, while the invasion is only local, before the entire system is poisoned. A child in robust health will usually resist the infection. The following methods of treatment are highly vaunted for their efficacy. Both of the drugs recommended are invaluable in destroying infusoria, and are used in in the hands of eminent practitioners with success:

Sulphur.—Put a teaspoonful into a wine glass of water and stir it with the finger instead of a spoon, as it does not readily amalgamate with water. When well mixed, it is to be given to the patient to gargle. When the fungus is too nearly closing to

allow the gargling, the sulphur should be thrown through a quill into the throat, and after the fungus has shrunk to allow of it, then the gargling. If the patient cannot gargle, take a live coal, put it on a shovel, and sprinkle a spoonful of flour of brimstone upon it; let the sufferer inhale it by holding the head over it, and the fungus will die. Sulphur kills every species of fungus in man, beast and plant, in a few minutes. At one time at Princess Mary's Cottage Home, London, an outbreak of diphtheria attacked fifty of the inmates. One of the lady nurses cured them all by causing the patients to gargle with sulphur, and to take it internally.

Permanganate of potassium.—Take ten grains and mix with one ounce of cold water. As soon as dissolved it must be applied with a rag or sponge, mop or swab, to the whitish places in the tonsils and other parts, on which is seen the diphtheritic membrane. Do this very gently, but thoroughly, every three hours until better; then every six hours until well. It does not give pain but is rather nauseous to the taste. In the stinking form of diphtheria this solution soon destroys all odor, and in most cases it destroys the membrane without leaving any bad effect behind.

The following is given if the tongue is coated white.

℞ Hyposulphite of soda, . ʒi.
Oil of sassafras, . gtts. v.
Glycerine and water, āā ℥ ij.

Mix. Give a teaspoonful every one to three hours.

If the tongue is not coated,

℞ Phytolacca tincture, gtts. xx
Glycerine and water, āā ℥ ij.

Tea-spoonful doses every one to three hours.

The phytolacca is the common poke-root and, as it loses its strength by drying and age, the tincture should be from the fresh root, or it is worthless.

CONTAGIOUS DISEASES common to infants usually need cause no apprehension. Under favorable conditions they run their course in a few days. Ordinarily, the danger, and ailments following these diseases are the result of the prevailing drug treatment. Give the patient light, fresh air and all the water he wants, with frequent bathing, and in most cases the physician will not be required. This is especially true of measles. The prevailing custom of confining the patient in heated and darkened rooms, smothering him with blankets, and dosing him with hot teas will bring about the very conditions to be avoided.

Give him no food unless he craves it, then for a few days liquids only. Remember, that all eruptive diseases are only the expression of existing conditions, and if not interfered with will leave the child in a better state of health. If the intelligent mother has given birth to a healthy child she need not fear to enounter these affections in their simple form. Indeed, children most in harmony with nature escape them altogether.

SCARLET FEVER, or scarletina is more liable to assume a malignant form, than any other eruptive fever. When this threatens, the case should be placed in the hands of a competent physician. It spreads by infection rapidly and insidiously. The rash first appears on the breast, then on neck, face, body and limbs. This is preceded by a sore throat, with the usual symptoms of fever. Thorough and abundant

ventilation is a most vital point in the treatment. Use carbolic acid freely. Keep a sheet wet in a solution of it hanging in the room. The patient should be frequently sponged. If the throat is troublesome apply a wet compress, and occasionally inhale steam. The wet pack as prescribed on page 225, is most valuable, if administered by an experienced person. An eminent physician testifies that he never lost a case of scarlet fever in which he used the wet pack.

In suppression of the eruption a hot bath or pack is efficacious in bringing it out.

Diet.—New milk and hot milk (reduced one-third.) Milk is a good antidote for poison, and lessens the virulence of the fever. Grapes, oranges and fruit juice are excellent.

MEASLES.

1. Rash appears the fourth day

2. Catarrhal symptoms are prominent, watery discharge from the eyes and nose, sneezing, harsh cough, etc.

3. The rash begins near the roots of the hair.

4. The rash is of a pinkish red or raspberry color.

5. The eruption is somewhat rough, so as to be felt by passing the hand over the skin.

6. Has a peculiar fetid odor.

7. Liquid, tender watery eye.

8. The cuticle is thrown off in minute portions, like fine scales of bran.

SCARLET FEVER.

1. Rash appears the second day.

2. Catarrhal symptoms are usually absent, but there is great heat of the skin, sore throat, and sometimes delirium.

3. The rash begins on the neck and face.

4. The rash is of a bright scarlet color, and by pressing with the finger a white spot is produced, lasting a few minutes.

5. Eruption usually presents no inequalities to sight or touch, and is so minute and closely crowded as to give the skin a uniformly red appearance.

6. A peculiar brilliant glistening stare of the eyes.

7. The cuticle is thrown off in large patches, especially from the hands and feet.

WHOOPING COUGH is both epidemic and contagious. It is usually mild in a healthy child, but severe and sometimes fatal in others. The younger the child the more dangerous the disease. The cough is generally worse at night. Even after apparent recovery it may be brought back by exposure to cold, by improper food, or by want of careful nursing. A reasonable amount of outdoor exercise is conducive to the favorable progress of the malady. Dampness should be avoided, as the skin is generally sensitive to cold, especially after a fit of coughing. Infants should be carefully watched day and night, that they may be placed in a favorable position during the paroxysms.

Light, digestible food in moderate quantities should be given frequently. Hot milk is especially soothing and nutritious, particularly during the first days of the attack, and may well take the place of all other food.

CONVULSIONS rarely attack very young infants unless from malformation of the heart. Convulsions usually accompany teething, indigestion, whooping cough, fevers, worms, indeed any disease that causes a reflex action upon the brain. Occasionally a child has a convulsion without any premonitory symptom, but usually there will be restlessness in sleep, a rolling of the head, twitching of the limbs with clenched fists, stertorious breathing, and heavy, lethargic sleep. From this condition there is suddenly involuntary muscular contractions, rolling of the eyes, frothing at the mouth and the head drawn backward. Whatever is to be done must be done quickly and generally before medical aid can be summoned. First,

the mother and attendants must command themselves. Nothing is more frightful than to see a little one in convulsions, but upon no occasion is self-possession more needed. Remember, children rarely die in the first paroxysm.

Get the child into hot water as soon as possible. Don't wait to remove its clothing; put it into a foot-tub or child's bath having the water as hot as can be borne, supporting it on two hands. Add from time to time as much hot water as the hands will bear. It should remain in the bath until relaxation is produced, and then be wrapped in thoroughly heated blankets.

If there is not sufficient warm water in the house for a bath, it is often quite as effectual to take a pitcher of hot water, turn the child upon its face, hold it over a pail, and pour the water on the back of the neck. This is more easily managed than a bath, and often is all that is requisite to bring about relaxation. A bag of hot salt laid to the back of the neck will prevent a return. If there is constipation or irritation in the bowels, give a copious enema of warm soft water. If worms are suspected add salt, a tea-spoonful to one pint of water.

For further treatment, as there are so many different things that will cause spasms, one should better depend upon medical advice.

In closing these brief hints upon diseases of children, I wish to impress upon the parent's mind the fact that in nine cases out of ten, children need no treatment for their ailments. Their natural recuperative power gives them ability to throw off disease in a marvelous manner.

Too much care and nursing is quite as harmful as

too little. It is ordinarily better to make light of their ailments and teach them the power of self-resistance to the encroachment of disease. A cheerful, hopeful manner, accompanied by the encouraging word, is quite as helpful in sickness of children as in that of adults.

Do not discuss their ailments before them. Avoid hinting that sickness is possible, or anticipating it for them as results of certain conduct. Keep it from your own mind also. Never allow yourself to say: "If you go out in the cold you will get sick." "Don't sit by the window; you will take cold." "Now do get out of that draft." "You must not eat so much. Now, there, not one mouthful more, you will be sick." "Do put on your overcoat and rubbers."

Now, dear mothers, this may be a new thought to you, but this very caution, born of love and solicitude, creates a *fear* that may make it possible for your children to be sick. Let a child lead an active, rollicking life in harmony with nature, and in himself will be certainly developed power to resist disease.

It is possible to make health contagious.

"Cheerily, then, my little man,
Live and laugh as boyhood can."

CHAPTER XIX.

ABORTION.

ABORTION or miscarriage is the term applied to the death and expulsion of the fetus previous to six months; after that and before full term it is called premature delivery.

The liability to abortion is more frequent at the beginning and during the third month. It is usually preceded by occasional loss of blood, which rarely is excessive at first, but in from three days to three weeks increases in frequency and quantity until it may absolutely amount to hemorrhage. The first symptom in some instances is a violent chill. In such cases soreness, heat and pain are soon located in the pelvis and the flowing may be deferred for a few days. One may have continuous pain more or less severe until the embryo is expelled; or it may come up at irregular intervals from day to day for some two or three weeks, there being such complete intermissions that the patient hopes each time that all danger is over, and that gestation may be completed.

The danger to the mother is from hemorrhage before the expulsion of the embryo, and from retention of membranes after the fetus is born. These decaying in the uterus, the poison is absorbed into the system and septicæmia is the result.

The *causes* of abortion, both remote and exciting,

are numerous. Any diseases of the womb that take away its vitality or prevent its enlargement will result in death of the fetus. Any general disease or condition of the system that results in weakness or feebleness may make the continuance of life in the embryo impossible.

Lack of room in the pelvis and abdomen is a frequent cause of abortion in first pregnancies. This is the result of tight and heavy clothing and insufficient exercise. Remaining too much in-doors and suffering the debilitating effects of impure, heated atmosphere, is also a remote cause. The violation of the laws of sexual congress is another. Immoderation in this respect is exceedingly harmful, as it diverts from its needed purpose the mother's energies, and weakens embryonic life. Any incontinence during pregnancy, endangers a woman who has once miscarried.

The recent causes are lifting, straining, a fall, a jar, a blow, a violent cold, or an acute attack of disease, sudden mental emotions, etc. The system so soon takes on any habit that, having once aborted, one is very liable to a recurrence of the same result in subsequent pregnancies, at the same period.

To *prevent* a miscarriage observe faithfully the hygienic rules laid down in this book. Make the best possible conditions for health in every direction. Especially observe the law of continence. Once threatened with abortion, hemorrhage ever so slight having set in, a woman should by all means take her bed and observe perfect quiet. She must run no risks. Apply compresses and take frequent short, tepid sitz-baths, live on a mild, cooling diet, and the danger may be averted.

Aconite.—Chill or fever with quick pulse and flow of bright red blood. Six drops of first dilution in a glass full of water; take a tablespoonful every hour.

Secale, 3*d.*—Cramp-like pains, blood clotted and dark, cadaverous expression of face. Dose: Six pellets every two hours.

Cimicifuga, 2*d.*—Pain in the back of the neck, aching in the limbs, back and groin, with pressing, bearing down. Dose: One grain every two hours.

A woman requires the same attention and treatment during and after a miscarriage, that she requires in a confinement. A labor at full term is natural; a miscarriage is unnatural, and often requires a longer time for the system to recover from the shock.

Feticide is a produced abortion, whether by drugs, intentional shocks, electricity, or by instrumental interference, either by one's own hand or by the hand of a surgeon.

Many women have been taught to think that the child is not viable until after quickening, and that there is no harm in arresting pregnancy previous to the feeling of motion; others believe that there is no *life* until birth, and the cry of the child is heard.

A high legal authority says: "The absurdity of the principle upon which these distinctions are founded is easy of demonstration. The fetus, previous to the time of quickening, must be either dead or living. Now, that it is not the former, is most evident from neither putrefaction nor decomposition taking place, which would be the consequence of an extinction of the vital principle. The embryo, therefore, before the crisis, must be in a state different from that of death, and that can be no other than life."

When the female germ and male sperm unite, then is the inception of a new life; all that goes to make up a human being—body, mind and spirit, must be contained in embryo within this minute organism. *Life must be present from the very moment of conception.* If there was not life there could be no conception. At what other period of a human being's existence, either pre-natal or post-natal, could the union of soul and body take place? Is it not plain that the violent or forcible deprivation of existence of this embryo, the removal of it from the citadel of life, is its premature death, and hence the act can be denominated by no more mild term than murder, and whoever performs the act, or is accessory to it, in the sight of God and human law, is guilty of the crime of all crimes?

The life of the babe in her arms is to the mother more precious than all else; her heart is thrilled with a pang of agony at thought of the least danger to its life. By what false reasoning does she convince herself that another life, still more dependent upon her for its existence, with equal rights and possibilities, has no claim upon her for protection? More than this, she deliberately strikes with the red hand of murder and terminates its existence with no thought of wrong, nor consciousness of violated law.

The woman who produces abortion, or allows it to be produced, risks her own health and life in the act, and commits the highest crime in the calendar, for she takes the life of her own child. She defrauds the child of the right to its existence.

By a wise provision we are placed in this world for growth, development and preparation for another

life. As we leave this life, we must enter the other. In so far as a human being is deprived of this existence, to that extent he is deprived of schooling and preparation for the other life. Pause for one moment and think of the thousands of stunted, dwarfed beings that are prematurely ushered into an existence that can not be normal and designed. Were infants to have been born into spirit life, provision would have been made to that effect. That they are born into this life is proof that this world is best adapted for their growth and education.

There may be no harm in *preventing* the conception of a life, but once conceived it should not be deprived of its existence in that world which in all its appointments is specially adapted to its development.

What are some of the incentives to produce abortion? An unmarried woman, seduced under false representations by a man who feels no responsibility for his own offspring, suffers alone all the shame and contumely of the act, and is tempted to cause miscarriage to shield her good name

Married women who fear that maternity will interfere with their pleasures, are guilty of forcibly curtailing embryotic life. Others, again, who are poor or are burdened with care or grief, or have licentious or drunken husbands, shrink from adding to an already overburdened existence.

The first class, the girls who have lost their virtue under promise of marriage—are most deserving of sympathy and commiseration, though none receive less. "Let him who is without sin cast the first stone." At the least imputation against a fair girl's character, even those professing to be the followers

of the loving Christ, often have so little leniency, so little of the Father's love in their hearts, that they hug their Christian robes to their bodies, lest they be contaminated by the polluting touch of the victim. They "pass by on the other side" and leave the poor broken-hearted child bleeding by the wayside.

The girl's lessons of life and purity have been learned mainly from one she loved and trusted, only to be betrayed. What wonder that in her ignorance of the value of life she should be tempted to add a second wrong to the first! She knows the shadow that has darkened her path; she realizes;

"Alas! for the rarity
Of Christian charity
Under the sun."

And if she can conceal the evidence of her guilt, she may hope by honest endeavor to retrieve her good name, and thus is tempted to produce an abortion.

Two wrongs can not make one right. Before God and her own conscience, the only tribunals that in justice have any right to accuse her, she can not by any act gain absolution.

When girls are given proper instruction upon the relation of the sexes and understand how to govern and guard themselves; when young men are taught that virtue has as high a meaning for one sex as another, that the protective chivalry of which they boast does not imply that they shall force the woman with whom they associate to the defensive; and that the *paternal* interest in, and responsibilities for a child are equal to the *maternal*, then the temptation to pro-

duce abortion for the purpose of shielding one's character will not exist.

Of the second class, who produce miscarriage for pleasure and selfish interest, there is little to say in extenuation. They may be victims of ignorance or of a false education. The maternal instinct is inherent in every woman's heart. It seems strange that any morbid idea of pleasure could antagonize the natural aspirations to such an extent that one could destroy the viability of her own offspring.

I well remember years ago the wife of a well-to-do lawyer making application to me to produce abortion. She had but one child, and he three years of age, and was surrounded by every comfort a prosperous business man could afford. I sought the cause of the unnatural promptings of this intelligent woman's heart. It seems that a trip to Europe was contemplated and planned for in the early summer, and that this unanticipated and chance maternity would thwart their expectations. With all the arguments I then possessed, I showed her the wrong she sought to do, but nothing seemed to weigh against the proposed trip. She returned the second and third time even, armed with a lawyer's sophistry to endeavor to persuade me to be accessory to the diabolical deed. No doubt one cause of her persistency was fear of trusting her secret to me unless she could persuade me to be an accomplice.

She probably found some one to assist her out of the "trouble," for she took the proposed trip, but I was not astonished to learn three or four years later that she was lying at death's door with consumption. How many times she produced abortion I know not,

but I was told that for months she suffered from uterine hemorrhages and in the weakened state of her system a violent cold settled upon her lungs which soon terminated her life. This was the physical result of the crime she had committed.

Of the last class, who have an apparent need to limit the size of the family, what can be said in extenuation of their committing this crime? Shall not the mother who already has many children, who is herself sick, nervous and prostrated, or else has a husband who is diseased or a drunkard, leaving her the support of the family, save herself additional care by arresting the life of the embryo? The heart goes out in sympathy for all such, but even the most aggravating circumstances can not atone for the crime. The whole nature of every true woman revolts against forced maternity.

Thoughtful minds must acknowledge the great wrong done when children are begotten under adverse conditions. Women must learn the laws of life so as to protect themselves, and not be the means of bringing sin-cursed, diseased children into the world.

The remedy is in the prevention of pregnancy, not in producing abortion. When men and women have learned the wise control of the procreative functions, then may we hope that children will be begotten in love and unselfishness. It is the undesired and undesigned maternity that is revolting to the nature of woman. As long as men feel that they have a right to indulgence of the passions under law, no matter what the circumstances, what the condition of the wife, or the probabilities of maternity, so long will the spirit of rebellion take possession of women and

the temptation enter their souls to relieve themselves of this unsought burden. May the day soon arrive when men will learn that even passion should serve reason, and that gratification at least should not be sought at the expense of conjugal happiness and *unwelcome children.*

CHAPTER XX.

MENSTRUATION.

MENSTRUATION is the sanguineous flow accompanying the maturation of the ovum in the ovaries. It generally occurs regularly every twenty-eight days, and in temperate climates continues from about the fifteenth year to the forty-fifth.

Physiologists differ as to the cause of this phenomenon. It was for a long time believed to be a cleansing process peculiar to women; that Eve, having through her transgressions entailed upon her daughters a curse, they needed more renovation and regeneration than men; and that aside from ordinary depurition this special secretion was given to them.

The theory now prevails that accompanying the maturation of the ovum there is a flow of blood to the generative organs, which in medical parlance is called hyperemia. The exudation of this venous blood from the membrane of the uterus constitutes menstruation; also that this menstruation is a provision of nature for the supply of a superabundance of blood, which during pregnancy is appropriated to the growth of the fetus. Thus is it allied to maternity, leading us to regard this function with reverence.

In a normal state the discharge is slight, being from one to three ounces, and lasts two or three days.

Certain physiologists claim that all sanguineous

flow is abnormal, that there should be no show of blood in a perfectly healthy woman. It is averred that the squaws of some Indian tribes have no show accompanying either ovulation or parturition.

Menstruation should be entirely devoid of suffering. A woman should have no cognizance of this function, save by the discharge. Could this be the rule instead of the prevalent exception, the capacity of strength and endurance either for work or pleasure would be increased one hundred fold. The nation not only needs strong men but strong women, strong in physical as well as mental development. This strength is required for prosecuting a persistent warfare against prevailing and existing wrongs, as well as for transmitting health and vigor to the coming generation.

A woman in perfect health need take no especial care and make no change in her manner of life at this period. But under our artificial habits of life, such a woman is the exception rather than the rule, and in most cases some attention must be paid to the recurrence of the menses.

Many young ladies in attendance upon school, feel a need of some indulgence at that time, and are often granted respite from duty. Women following any regular occupation have learned to plan a day of lighter work at the recurrence of the period. Yet on the contrary some have found that congestion and pain are relieved by occupation sufficient to interest the mind, with exercise adapted to increase the circulation.

THE DISORDERS incident to menstruation are: Amenorrhea, Dysmenorrhea and Menorrhagia.

Amenorrhea is absence or suppression of the menses

caused by cold, an enemic condition or some ovarian or uterine affection. It is also often the result of mental conditions, as grief, fright, or severe mental strain.

One need not be uneasy about suppression when there is no special constitutional disturbance. Our grandmothers taught the absence of the menses was always greatly to be feared; the prevailing idea being that serious results would follow to some vital organ. This is a mistake.

Patients during treatment for uterine ulceration and inflammation, often gain steadily in health, although the menses cease for months. This has been observed especially in hygienic institutions.

At all events, in treating suppression avoid using strong remedies, such as old fashioned tansy tea, steel filings and ergot. These produce congestion, and may be the source of serious chronic ailments.

See to it that a general condition of health is attained. With plenty of out-door exercise, congenial employment and freedom from care, the young girl may with rare exceptions trust to nature for correction of suppression.

Dysmenorrhea, or painful menstruation, is of such frequent occurrence that it deserves especial attention. Most young ladies experience more or less suffering at this time. It may be only nervousness, wakeful nights, a slight headache, some pain in the back or pelvic regions, and a disposition to be alone; or the attacks may be severe, with pain in the back and pelvis, running down into the limbs; the surface and extremities cold; face pallid, with nausea, vomiting or fainting, and perhaps spasms.

This ought not to be, and, in most instances, need not be. With our present knowledge, the conditions for and causes of dysmenorrhea may be removed.

Among causes we find inflammation of the ovaries, oviducts, or mucous membrane of the womb, mechanical closure of the outlet of the womb, or, simply constipation, neuralgia or rheumatism.

With inflammation of the ovaries there is, previous to the recurrence of the menses and throughout its course, a dragging pain in the pelvis with swelling and soreness of the breasts, and more or less mental distress. These symptoms are not always relieved by the flow.

Inflammation of the mucous membrane of the uterus is the most frequent cause of dysmenorrhea. With this the pain begins with the flow and increases as the flow increases. There may be a discharge of shreds of membrane or clotted blood, and sometimes a membrane having the entire form of the cavity of the womb. This is produced by deposits of fibrine, like that of membranous croup.

When there is undue closure of the cervix the pain precedes the menstrual flow, and is relieved as the discharge becomes free.

The *remote causes* for dysmenorrhea are errors in dress and diet, want of exercise, etc.

To errors in woman's dress more than any other one thing is the unnatural pain due. Almost daily, women come to my office burdened with bands and heavy clothing, every vital organ restricted by dress. It is not unusual to count from sixteen to eighteen thicknesses of cloth worn tightly about the pliable structure of the waist.

The pelvis and chest are well guarded from intrusion by the ribs and pelvic bones. But just at the point where belts are adjusted there is no protecting wall. Thus the parts are easily deformed, consequently digestion becomes imperfect, the circulation obstructed, the respiration restricted, and what is worse than all, the viscera crowd down upon the womb, the citadel of life.

Thus, by abuse, the maternal organism fails of fulfilling the divine charge committed to it by the Creator. The wonder is that intelligent, educated woman has no thought of her relation to posterity, and her responsibility to offspring.

Exercises adapted to develop the muscles of the trunk and abdomen, giving breathing power and room for all the viscera will be found very satisfactory in the results to women who will arrange their clothing suitably.

The restriction of young girls, according to the usages of society, at the time when they most need exercise and muscular development, is not only mistaken wisdom, but a cruel physical wrong. They *must be ladylike!* So, perforce, they must not jump nor skip; they must not run up stairs two steps at a time, *like a boy. No romping allowed!*

The physical freedom which is everywhere accorded to a boy, and by which he, all unconsciously fits himself for manhood, is forbidden the girl.

So she grows up without strength of nerve or muscle, and readily becomes a victim to all the ills that woman is heir to.

A very little care and planning devoted to this subject would bring to women both health and hap-

piness. Like Rose, in Miss Alcott's delightful story, a naturally frail girl may be developed into a hearty and vigorous young woman, and this too without unduly subjecting her to the mortification of singularity.

Neither is it necessary, in order to preserve health, that her thorough education should be neglected. The hue and cry that has been raised against the higher education of woman on the ground of her physical incapacity to endure severe mental training, is not well founded.

The fact is that girls and women can bear study, but they can not bear compressed viscera, tortured stomachs and a displaced uterus. The impure air, almost universal in schoolrooms has much to answer for in the alleged incapacity of girls for mental wear and tear. Given pure air, loose and light clothing and unimpaired digestion, and our girls will in due time prove to the world that, notwithstanding a vigorous pursuit of study, "a girl is just as good as a boy."

The out-door games and amusements of the present day, lawn tennis, croquet, bean-bags and tricycling are helpful in their tendency.

Next to errors in *dress* and deficient *exercise*, errors in *diet* may be responsible for painful menstruation. How can this be? Once, on inquiring of a class of young ladies the cause of this trouble, I received various replies; as skating, jumping rope, climbing stairs, improper clothing, etc.

A little eleven-year-old girl raising her hand, asked: "Is it not eating too much candy?" The rest of the girls laughed. But I replied, "You need not smile; this young lady has sounded the keynote of your

trouble. It is not only too much candy, but you eat too freely of the carbonaceous foods, fats and sweets, without taking sufficient exercise to have them appropriated. Inflammation is the result and hence suffering ensues."

TREATMENT for dysmenorrhea must be palliative and curative. No young girl should be allowed to endure this pain. It gives a shock to the nervous system, which sooner or later will act upon her general health, and depreciate her vitality.

In palliative treatment it has been customary to use alcoholic stimulant in some form. Symptoms at first are relieved, the blood being caused to flow to the surface, thus lessening congestion. The patient is made perhaps not actually drunk, but is stupefied. My observation, however, is that menstrual pain removed by this agency, recurs more severely at subsequent periods. The reason of this must be that the alcoholic stimulant increases the already inflamed condition.

The application of heat in some form will safely relieve almost any case. A relay of hot lamp chimneys is available in sudden attacks, even if at night; or a hot plate or stove-lid, wrapped in cloths is excellent in an emergency. In more severe cases, use hot fomentations (Page 114) or the hot water bottle.

A hot sitz-bath (Page 184) is the best resort where cramp-like symptoms with vomiting or fainting are experienced, or where the patient is threatened with spasms. Anticipate suffering by this treatment as soon as indicated by premonitory symptoms. Continue the bath until a copious perspiration is induced, probably from thirty minutes to an hour. Then rub

off lightly without exposure, keeping wrapped in the blankets, and applying the hot water bottle, lie quiet for some time. Many who ordinarily suffer from three to five days can be relieved in one hour by this means alone. This course will prevent a recurrence of so severe an attack.

The curative measures employed must accord with the pathological condition of the patient. For local ailments, treatment must be that indicated for them; neuralgia and rheumatism will demand their own suitable remedial agents.

A lady, thirty-five years of age, had been for a long time a great sufferer at every menstrual period, five or six days being spent in bed each month. There was apparently no uterine disease. Ordinary treatment proved ineffectual. A casual inquiry at length disclosed the fact that she had long been afflicted with rheumatism, not confined to any locality. This gave a clue to her case, and a short treatment for this affection resulted in entire recovery from both that malady and the distressing menstrual attacks. The thermal bath (Page 118) was mainly depended on in her cure.

Local treatment or remedies will seldom be found necessary, if the whole system is kept in the best hygienic condition. A young woman had for nine years been a martyr to dysmenorrhea, spasms attending every period, often continuing for days. Like the woman in Scripture, "She had suffered many things of many physicians, and had spent all that she had, and was nothing bettered, but rather grew worse," having had in all nine doctors, one of whom had performed a severe operation. Although still young,

she was almost a perfect wreck. She had no strength for manual labor, often being unable to walk across the room. Her mental condition was equally deplorable. She was very sensitive to the cold, and consequently wore much heavy clothing suspended around her hips.

In her case few remedies were used. She was induced to make a radical change in her dress, and put upon a thorough course of exercises adapted to develop and invigorate the muscles of the abdomen, and insure a healthy action of the viscera. She was also encouraged to assist daily in light housework, with much free exercise in the open air.

The change was marvelous. Upon the recurrence of her next period, a hot sitz-bath was administered at the first symptoms of distress, and relief was speedy. Her improvement steadily continued; she was no longer agonized with pain and subject to convulsions. Before the three months of her treatment had expired she was entirely restored to health.

The alteration in her appearance was great, buoyancy of manner and vivacity of expression taking the place of the look of dumb hopelessness which had been hers. The leaden load of physical suffering was lifted from her brain, and a new mental life began. No patient could evince or express more hearty and grateful appreciation of the change which had been wrought.

This is only one of many instances illustrating the efficacy of simple hygienic methods. The cases are infrequent that will fail to respond favorably when nature is given an opportunity to rally her forces.

Menorrhagia, or profuse menstruation, accompanies

inflammation, ulceration, polypus and other uterine diseases. It is not unusual to find it with dysmenorrhea, as it may be induced by the same causes.

THE TREATMENT is similar in both disorders.

Aconitum, crude tincture.—This is one of the first remedies to be sought in any kind of hemorrhage, especially where there is throbbing pulse, with cold hands and feet. *Dose:*—Two drops in half a glass of water, tablespoon doses every ten to thirty minutes, according to severity of case.

It is important to remember that aconite is a number one remedy in the first stages of hemorrhage from any organ. One can hardly go amiss in giving it. It has a specific effect in controlling the heart's action, and thus relieves congestion and hemorrhage. An old lady had for twenty years been subject to frequent attacks of hemorrhage of the lungs. She never allowed herself to be without her bottle of aconite, and was always able to check an attack by using it promptly.

Aconitum, 2d.—Is also indicated in cases of inflammation or congestion of the uterus or ovaries, especially if attended with febrile symptoms.

Cimicifuga, 2d.—Heavy, aching pain in the back, extending to limbs, restlessness, cannot keep still. Rheumatic or neuralgic dysmenorrhea. It is also valuable for preparatory treatment, taken two or three doses a day for ten days previous to the recurrence of the period.

Belladonna, 2d.—Congestive enlargement of the uterus or ovaries, bearing down pains, and heat in the vagina.

Pulsatilla, 2d.—Vomiting, fainting, scanty menses,

chilliness, moving pains in abdomen, mental depression, hysteria. Discharges bright in color.

Caulophyllum, 2*d*.—Painful menstruation with a normal discharge. May be used as a palliative during the menses, and as a curative agent meanwhile.

Ergot, 3*d to* 6*th*.—Very severe, cramplike pains, can not be endured. Discharge dark, clotted and fetid Surface and extremities cold; features pinched.

Dose:—In each of the above remedies ten drops in eight spoonfuls of water. Take one spoonful every half hour.

CHAPTER XXI.

DISEASES OF WOMEN.

UTERINE DISEASES are the cause of many of the pathological symptoms accompanying pregnancy, and may be the cause of the pain in parturition. To attain to the best conditions for maternity, the removal of these disorders is essential.

Nine-tenths of American women are more or less afflicted with these maladies. They are thus unfitted for ordinary vocations, and the functions of reproduction are so perverted that maternity becomes a dreaded burden.

This book is not a "doctor book" in the ordinary understanding of that term, neither is this chapter a regular treatise upon the diseases of women. The causes of these ailments, however, and some simple common sense hints are given. These will enable women to avoid and to alleviate suffering, without resorting to drugs, or severe local treatment.

INFLAMMATION is the most common derangement of the uterus; indeed, some authors claim that it causes or accompanies all other uterine diseases.

Inflammation may affect either the mucous membrane, the cervix or the fundus, or the entire organ may be involved. When the lining membrane only is affected, the patient has heat and burning in the pelvis, with or without pain, and there is a light,

glairy discharge which later may become dark and offensive and often irritating.

Inflammation in the fundus or cervix gives at first a dragging, heavy pain in the pelvis, extending down the thighs and legs, with heat and pain in the lower part of the back. It is also attended with swelling of the organ and more or less discharge.

As the disease progresses there are usually sympathetic or reflex symptoms. These are heat and pain in the top of the head, aching, sore pain at the base of the brain, a pain and burning between the shoulders, which may extend up and down the spine, and to the arms. Physician and patient both are often deceived, and diagnose this last symptom as neuralgia or spinal complaint. The patient may have stricture and pain in the throat, with a dry, nervous cough. She also is liable to severe attacks of headache, suffers from dyspepsia, and indeed her symptoms are apt to assume the form of, or resemble any disease.

Her mental sufferings are even worse than her physical. She has loss of memory, is fretful and irritable. Carried to the extreme, her mind becomes unbalanced and insanity results. Statistics show that uterine disease is a very common cause of insanity in women.

Ulceration is usually found upon the mouth of the womb, or occasionally on the lining membrane. *The raspberry ulceration* is the most common form. This appears like granulations on the eyelids, and is always preceded and accompanied by inflammation. The surface becomes red, swollen and then abraded, resulting in ulcers. This is accompanied by a thick,

purulent, yellow discharge, which, as the disease advances, becomes thin and bloody, with an offensive odor. The pain and reflex symptoms are much the same as in inflammation.

Induration, or thickening and hardening of the cervix is a frequent sequel of inflammation, especially where caustic treatment has been used.

Violations of physical laws cause the occurrence of the above named diseases.

Women take it as a matter of course that the organs of generation should be diseased, without one thought of their responsibility in the matter. Physicians, too, as specialists, treat woman much as though she were a machine to be adjusted at will.

Errors in *dress*, in diet, want of exercise and the abuse of the sexual relation are the principal causes of these ailments. The frequent use of drugs that act directly upon the generative organs induce and enhance these affections.

There is no doubt that the customary dress of woman, causing such deformity, and such perversion of all her powers, is the prime factor in producing ailments peculiar to her sex.

Being unequal in distribution, it leaves the extremities unprotected; by pressure it restricts digestion, respiration and circulation, while by its weight it burdens the weakened muscles.

Who has the power to save women from this one sin? Who has the pen or voice to present the claims of unborn generations? Many women who have suffered years from uterine diseases have finally recovered by simply adopting a hygienic dress. One thing is certain; it matters not what treatment one

takes for these ailments, she cannot hope to get well and keep well if she does not remove the restraints of clothing. (See Chap. VII.)

IN DIET, highly seasoned food, rich pastries, and indeed all food containing in excess the carbonaceous elements, especially the fats and sweets, will produce an inflammatory condition. Some irritating cause locates the affection in certain organs. Constipation also will induce and aggravate any uterine affection.

The *treatment* of these disorders should be less local than constitutional. The whole system must have the best conditions for health, giving nature a chance to restore harmony in organic powers.

The *tepid sitz-bath* will be found invaluable in both inflammation and ulceration of the womb. It should be taken in most cases as often as every other day, preceded by exercise, and followed by friction and rest. Half the value of this bath is lost if one fails to lie down after it. The best time for the bath is in the forenoon, but if, on account of daily duties, this time is unavailable, there is no special objection to taking it just before retiring. It is very quieting, and prevents sleeplessness.

The thermal bath (page 118) is especially desirable if the circulation seems sluggish, the skin inert, and the patient sensitive to cold. Take twice a week.

Hot vaginal injections are found invaluable for these affections. They should be taken with a fountain syringe, using a large quantity of water as hot as can be borne. If practicable the patient may recline over a bed pan. Not having this, she should stand over a vessel, elevated upon a chair. If the discharge from the womb is offensive, use carbolic soap.

Glycerine diluted one-third with water, and applied by inserting absorbent cotton or oakum is excellent to reduce inflammation and induration. This at first increases the discharge. In severe cases it can be applied daily, but ordinarily every other day is sufficient. Some mild remedies like hydrastis or calendula are useful in stimulating healthy action, and can be used under the direction of the physician.

Exercise is one of the most valuable therapeutic measures for uterine affections. If one is quite feeble, applied motion in the form of Swedish movements, massage, or muscle-beating is most desirable. Women suffering from uterine diseases are unable to take needful exercises in the erect position. Walking, riding, housework, etc., aggravate the symptoms, increasing the local irritation and inflammation.

In most women the muscles of the trunk or the abdomen, and the involuntary muscles of respiration, from lack of proper use, are weak and atrophied. "They have not been trained to life's occasions." The following exercises, taken in a reclining posture, will serve the purpose of any exercise in producing attrition and vigor of muscles, accelerating the circulation of the blood, and developing the involuntary muscles used in respiration; at the same time they increase the action of all the digestive organs, and by a derivative effect remove local inflammation, besides mechanically correcting mal-positions:

1. Reclining on back, holding knees and shoulders firm, move hips from side to side ten times.

2. Same position, on spring bed, move hips up and down fifteen times. This exercise can be taken by one that is weak, as the springs aid the motion.

3. Flex knees, same as No. 1 twenty times.

4. Flex knees, same as No. 2 twenty times.

5. Flex the knees and sway them from side to side twenty times.

6. Flex the knees and elevate the hips, resting the body on shoulders and feet. Move slowly up and down ten times, holding to count ten.

7. Elbows flexed to the sides, hands grasped by an assistant and slowly brought to a horizontal position parallel with the head, patient resisting. Bring them back to the sides, assistant resisting, ten times.

8. Same, only bring arms to a perpendicular position.

9. Reclining, face downward, flex knees and sway feet from right to left fifteen times.

10. With the help of an assistant, flex and extend the limbs, using resistance as in No. 7.

11. Rest on elbows and sway shoulders from right to left ten times.

12. Elevate the body slowly five times, resting only on toes and elbows. Hold to count ten.

13. Recline on back, and make hand thrusts, with or without weights, upward, outward, forward and downward.

14. Same position, flex and thrust the limbs downward alternately.

15. Kneel face downward, gradually raise the hips until the whole weight rests upon the shoulders. Remain in this position for five minutes. This is invaluable for prolapsus and retroversion, and should be resorted to several times a day. One may get the position more readily by sliding off from a bed or lounge head first; relatively, standing on one's head.

16. Lie face downward on two stools, 18 to 24 inches apart, resting the knees upon one and the shoulders upon the other, five minutes.

17. Same position; have an assistant knead the bowels by gentle pressure with clenched fists five minutes.

18. Same position, elevating hips five times.

The last three are quite severe, but if there is strength to adopt them, they are valuable in retroversion of the womb.

If there is no pelvic inflammation, and it is required to aid digestion and develop the muscles of trunk, the following are invaluable:

19. Sit upon a stool, feet firmly upon the floor, hands upon sides, hips firm; sway body from side to side as far as possible.

20. Same position, hands clasped over the head; sway body backward and forward.

21. Same position; combine Nos. 19 and 20 in a twisting motion of the body. The effect of the three last can be varied by holding one or both hands perpendicular over the head.

22, 23, 24. Same as 19, 20 and 21, only standing position.

The beneficial effects are increased in the six last by inflating the lungs.

THE SEVERE CAUSTIC TREATMENT that has been so universal in these affections is greatly to be deprecated. There are fashions in medicine as in other things, and the one fashion the last twenty-five years has been local treatment for diseases of women. In no department of medical practice has the physician's prerogative been more abused. For the slight-

est ailments the severest applications are often employed.

Nitrate of silver, sulphate of zinc, corrosive sublimate, tannic acid, nitric acid, all violent in their action, are in common use. Physicians are known to resort frequently to the application of a probe heated to a white heat, and, what is just as bad, to wet a swab in fuming nitric acid, and introduce it into the womb. The delicate mucous membrane is burned and scarified, the patient tortured, and the nerves receive a severe shock. Patients able to be about are often laid up for days by one of these treatments.

One day I met a lady upon the street who had been confined to her house for two years. I expressed pleasure at seeing her out. She told me that she could get out because her doctor was absent and her local treatment suspended. She said: "That always makes me sick in bed three or four days."

"What! do you permit such treatment?"

"The doctor says I cannot get well without it."

She, like many other poor suffering women, was persuaded that all this torture was necessary to her final recovery.

Physicians are known to keep women under treatment two or three years, yet frequently, instead of improvement, there is only a constant decline in health and strength.

The tide is now turning, and both physicians and patients begin to see that a great wrong has been done. So high an authority as Dr. Gaillard Thomas says: "Every one who has had experience in the treatment of these disorders must have been impressed with the wonderful improvement in cases

which have long resisted local treatment, resulting from a sea voyage, a visit to a watering place, a course of sea bathing, or a few months spent in the country."

Dr. George T. Elliott says:—"In cases of uterine diseases, the best success will be attained by securing for patients a life of muscular activity, so equalizing the circulation. And that thus the local treatment, now so much in vogue, might commonly be dispensed with."

"It is easy for a sensitive woman to persuade herself that her afflictions from the toothache downward, are due to diseases of the womb. Here comes in the charlatan, to exaggerate the disease, if any, and to beguile the patient with promises of cure. The speculum, the caustic and the knife look like work, and she feels that *something is being done* for her.

"By and by the bubble bursts, and for all the good that this torture has accomplished, the poor woman might as well have adopted the scientific treatment of La-potai, namely, the application of a blister to the top of the head, to raise the fallen womb.

Dr. E. R. Peaslee says of local treatments: "They have thus far produced, on the whole, more evil than good."

Dr. Taylor, in his valuable little volume, "Health for Women," assures us "that by using mere local treatment, the essential disease itself is left neglected, untouched, and even unsought; that symptoms only command the attention, and symptoms that will subside and become of trifling account whenever the essential malady is recognized and provided for."

Such words as these, from men high in the profession, give hope of a tendency to a reaction from

the prevalent dependence on local treatment. When such men take the back course, and condemn their own uterine surgery, hope may arise for long-suffering woman.

This *local treatment should be protested against by women.* It is a relic of the past, and is contrary to science and common sense.

Within the memory of many now living, every patient under treatment for acute or chronic diseases was bled. He was also tortured by blisters, leeches and setons. Had he fever, he was denied water to quench his thirst. How the mother's heart has been wrung with anguish when her darling babe, lying sick in her arms, has pleaded again and again for water? Who has not heard "Drink! mamma, drink!" and turned to hide the sympathetic tear, for, by the doctor's orders, the little one must be denied!

To-day, where is the physician who bleeds his patient, and applies the blister? Many young doctors have never even seen a leech. Who would think of denying the fever patient water, and all that he desires?

What has wrought this change? Mainly the protest of the people. Reforms in medical practice have come because the people have demanded them.

Severe local treatment should be classed with the bleeding and blistering, and, with them, be relegated to the past. Women must protest positively and persistently against the burning, probing and scarifying of the womb. As you value health and life, seek such measures for restoration as are more in accordance with nature.

LEUCHORRHEA is not a disease, it is only a *symptom*

of uterine derangement, as a cough is of a lung or throat affection. It is an increase of the normal mucous secretion, being an effort of nature to throw off inflammation. As a symptom it need cause no uneasiness, and should not be interfered with, unless by an occasional warm vaginal bath to insure cleanliness. The conditions which cause the discharge being removed, it will give no farther annoyance.

At all events styptics and astringents should not be resorted to. They only arrest the discharge temporarily, and do not remove the cause. The general and local treatment for inflammation is usually sufficient. Remember that as long as the uterine irritation exists one is better to have this discharge than to have it suppressed.

THE DISPLACEMENTS of the uterus most frequently found are prolapsus, retroversion and anteversion. Very much the same causes induce these different deviations.

The supporting muscles in the perineum become weakened, it may be from a lack of exercise, or from the constant pressure of hardened feces, consequent upon constipation, or sometimes as the result of long continued inflammation.

The viscera are pressed down from above by the stricture and weight of clothing. The mobility of the organ renders it susceptible to change of position under these circumstances.

These conditions must be overcome, or treatment will prove futile. In most cases the uterus can be readily restored to its natural position. First remove the pressure from above, and then take the exercises prescribed on page 267. This will give room for the

pelvic viscera, and strengthen the supporting muscles. Nature's recuperative powers are never more remarkably demonstrated.

The prevailing custom of introducing pessaries of rubber, glass, etc., is to be deprecated. While they may give temporary relief, they increase the relaxation of the vagina and muscles, besides constantly drawing the attention of the patient to her ailment.

The connection of mind and thought with pelvic disorders is close, and is susceptible of becoming permanently fixed upon any organ. The effect is highly injurious. It must result in increasing this kind of morbid action, thus fixing and perpetuating the disease. This should most carefully be guarded against. In every way divert her mind from the subject. Let her but forget that she has a womb, and she will have found the best remedy for her affection.

HYSTERIA is only a culmination or exaggeration of the reflex or nervous symptoms in diseases of the uterus. It is simply temporary insanity, and should be treated as such. The patient loses self-control, and gives way to violent paroxysms of laughing or crying, possibly fainting fits and convulsions.

Some quiet, decisive means will restore her. Inhalation of ammonia, cold water on the head, a hot foot bath, a full bath, or even a decided word from a friend readily establishes her balance. The spoken word must not be given in a combative spirit but simply with cheerfulness and decision. Banish fear from your own heart, and agitation from your manner, and then say to the patient, "Why, you are all right! Listen to me a moment." Get her attention, then with tact relate some incident, or make some start-

ling statement that will change the current of her thought.

The mind can rise superior to the body, in uterine affections, as in all other bodily ailments, and thus aid in establishing harmony. One can, by persistent argument with himself, conquer or dispel the thought of pain and disease.

It is done by assuming an opposite condition, and persisting in the same. Also, by engaging in some work which calls forth the highest impulses.

By seeking to ennoble and enrich the lives of others, by ignoring personal sense and pleasure, the soul, the *ego*, becomes in harmony with the spirit of the universe.

The body is only a reflection of the spirit, is constantly and entirely subject to it, and if the spirit rises above error, discord and sin, dwelling in the realm of truth and love, disease and infirmity of the flesh cannot exist.

CHAPTER XXII.

CHANGE OF LIFE.

CHANGE OF LIFE is one of the scape-goats of physicians and bugbears of patients. If any lady from thirty-five to fifty-five years of age is afflicted with dyspepsia, neuralgia, rheumatism, consumption or any other ailment, the doctor, not being able to cure her, pronounces it the meno-pause or "change of life," and that time alone can bring relief. Most women plan and expect to give up from eight to ten years of the best part of their lives to this climacteric period. They consider themselves of little account for business or social duties. They must be petted and nursed, and have every passing whim gratified.

The *meno-pause* is simply a cessation of ovulation. It is the exhaustion of the germ-making power. If a woman menstruates because of the monthly ovulation and deposit, she will cease to menstruate because ovulation has ceased to be a physiological operation.

At puberty the ovaries enlarge. When fully developed they begin casting off each month perfected ovula, which are taken up by the fimbriated extremities of the oviducts and conveyed to the uterus. This function of the uterus continues on an average thirty-two years. After the meno-pause begins the ovaries become small and shriveled, resembling a peach stone in shape and appearance.

"At the same time that the ovaries are undergoing this remarkable degenerative change, a similar change is taking place in the other organs of generation. The uterus diminishes in size, as does also the vagina. The mouth of the womb becomes contracted and after a time entirely closed. The upper part of the vagina is often contracted to such a degree as to produce folds closely resembling those which result from serious inflammation about the uterus. The breasts usually diminish in size. These changes indicate unmistakably the decline of the function of reproduction, preparatory to its entire suspension.

"As a rule, the capability of procreation ceases with the cessation of menstruation; but this is not universally the case. Instances are on record in which pregnancy has occurred before the appearance of menstruation. This seeming anomaly is due to the fact that ovulation and menstruation are really two distinct acts, although usually coincident."

Although menstruation usually ceases from the forty-fifth to the fiftieth year, cases are on record in which "change of life" occurred at much earlier as well as later periods. Dr. T. J. Patchen relates a remarkable case where a girl ceased menstruation at twenty-two, accompanied by all the physical changes of the organism as well as attended by the usual symptoms of that period. Cases are recorded where menstruation continued until the seventieth year with regularity, and the reproductive function remained unimpaired.

In a state of health the meno-pause should be attended by no unpleasant symptom, by no change from the normal condition. Ordinarily all the suffer-

ings and ailments incident to this period can be accounted for from some ovarian or uterine disease, dyspepsia, or other deviation from health. Irritation or congestion in the ovaries, more than any other cause, decides the numerous symptoms of the climacteric. Uterine inflammation or derangement also causes many of the distressing ailments of the meno-pause.

Irregularity in menstruation may be looked for about the forty-fourth year in temperate climates. In the torrid zone where girls menstruate as early as the tenth or twelfth year it may occur much earlier. But in this country it is often delayed even far beyond the fiftieth year.

There may be occasional absence of the menses, or it may first be indicated by frequent and profuse menstruation. In rare cases the menses cease suddenly without any warning or any special derangement. Women often feel alarmed at the sudden suspension of this discharge, but their fears are groundless if all other functions are normal. With some women the flow is alternately scanty and profuse for months.

The length of time in which these symptoms occur is extremely variable. It may be only a few months or it may be several years. In extreme cases the symptoms have continued nearly twenty years. The average period however, is about three years.

These changes are accompanied by various pathological symptoms. *Hot flashes* or "flushings" are especially peculiar to this period. First one feels a decided glow or heat as if suddenly transported to a hot room; this is soon followed by a perspiration

which may terminate in a chill. They are often accompanied with a sense of suffocation or violent throbbing. The phenomenon is precisely the same as blushing, and indeed this may be said to be a sort of pathological blushing.

With some the chill is the precursor of the "hot spell." The flashes occur at all times of day, and often one awakens with them in the night. They may occur but two or three times a day or every ten or fifteen minutes, making one wretched by their frequency. They are often the result of some sudden emotion as fright, anger, grief or anxiety. They are wonderfully the product of thought. By observation the patient will notice that they are also more frequent after drinking wine, tea and coffee, or partaking of stimulating food. Sometimes nausea and vomiting accompany flushings, as well as a feeling of weakness and *malaise*.

Profuse perspirations, sometimes so copious as to saturate the bed clothing, are also a common symptom of this period. They may follow the hot flushes or occur independently. They are more usual during sleep. They also accompany mental excitement of any kind.

Uterine Hemorrhage, common to the "change of life," is the only peculiar symptom which really need cause any special anxiety. This may occur once a month or at longer intervals, or may be almost constant. It may become so profuse as to endanger the life of the patient. Indeed, one is often surprised that life can be sustained under the great loss of blood that some experience.

The *appetite* is sometimes capricious and fitful, as

during pregnancy, or at the beginning of menstruation. Frequent derangements of stomach, liver and kidneys occur.

Skin diseases, often accompanying this period, are especially distressing from being attended with great itching. One also may have constipation, or diarrhea, swelled limbs or joints, swelled breasts, headaches, with heat and burning in top of the head or a sore pain at base of the brain; dizziness, dimness of vision with floating specks before the eyes, loss of voice and aching at the base of the tongue, insomnia, strange cravings, difficult breathing, neuralgia, hysteria, etc.

Tumors, cancers, polypi, etc., are more frequent during the meno-pause than at any other time of life. If the neck of the womb has been injured by attempts at abortion or indurations caused by frequent applications of caustics, conditions are produced that are liable to result in cancer.

"*The mental symptoms* are quite as marked and prominent in most cases as are those which relate to any part of the system. *Loss of memory* to a greater or less extent is apt to be first and most noticeable. Frequently there is an entire and most remarkable change in disposition. A kind, patient mother, or forbearing, confiding, exemplary wife, becomes irritable, unreasonable and suspicious.

"Her natural modesty may even give place to wantonness in extreme cases, and the mother instincts may become so thoroughly obliterated as to cause an almost uncontrollable desire to take the lives of her little ones. The once happy woman becomes despondent, moody and taciturn. She avoids company, has no taste for amusements, and spends her time in

watching the varying symptoms, and bewailing her real and imaginary woes. In many cases, actual insanity, usually of a temporary character, is the result of the profound disturbances which the system undergoes at this time."

Constipation is not unfrequently attendant upon, and the cause of, many symptoms of the meno-pause.

GENERAL TREATMENT.—First: Convince yourself that there is no actual need of any indisposition connected with the "change of life." Forget all the traditions and teachings upon this subject, and learn that *nature creates no pathological conditions*, and that if you live according to her laws you can by no possible means experience suffering.

You have no use for these ailments. If you are possessed of any stubbornness in your nature, bring it into requisition at this time. Plant your foot down with emphasis, and say, with one of old, "Get thee behind me, Satan."

It is thoroughly proven that mind can control even malignant diseases, and a woman that has lived until she is forty-five should know enough, and be strong enough in her mental organization to say to these symptoms, "I will not be your slave, you cannot dominate my life and chain my energies." Do not wait for some doctor to cure you with bread-pills or placebo powders.

The *physical should be subjective to the mental*, and can be if one learns the law. The world is only beginning to know how much can be accomplished for physical health by the controlling power of the mind.

The charge must be laid to physicians that women have made such a mountain of the meno-pause, and

they must undo their work by teaching that this is only a natural change, and removing it from the category of diseases.

Before and during this period observe all conditions of hygiene. Perfect health and vigor is more frequently attainable than women are apt to believe. The maintaining of a hygienic life by proper dress, diet, etc., will go far toward causing the "change of life" as a deranged condition to be unknown.

SLEEP IN ROOMS so thoroughly ventilated that the air will be as pure and sweet as the out-door atmosphere. If women would increase the capacity of their lungs and breathe air abundantly charged with oxygen, four-fifths of their ailments would be prevented. But who has the wisdom to convince them of this?

THE DRESS AND EXERCISE that increase ability to breathe with the diaphragm and abdominal muscles do more to prevent and cure diseases of women, if not all diseases, than all other possible preventives or medicines. When a mother thinks her rosy, nine-year-old daughter is deformed, and she must begin to put her in stays to change her *horrid* figure to one that is trim and neat, what can we hope for the daughter when she takes the responsibility of her own garments? If I could do the greatest thing to stay degeneracy and disease of the human race it would be to convince women that lung power more than anything else contributes to health, longevity and power of endurance.

A sponge bath (page 112), upon rising in the morning, taken quickly, three or four times a week, is invigorating. Accompany it by friction from the hand,

a Turkish towel or flesh brush. Follow it by a draught of cold or hot water, the latter if there is dyspepsia.

A hot sitz-bath should be taken in case of inflammation of the ovaries or uterus. (See page 184.) This may be taken every day for a week, and then every other day. In case of hemorrhage this bath is invaluable, and will relieve it when all other means have failed. It can be taken during the hemorrhage or at frequent intervals between times.

Hot or tepid vaginal injections are invaluable for controlling hemorrhage and removing congestion of the uterus. For this it is best to use a fountain syringe, hung very high so as to get good force to the water. This measure alone often removes many of the unpleasant symptoms of the meno-pause.

Hot fomentations may be applied twice a day for pain in the back. The hot water bottle is the best for this. Should be very hot and continued thirty or forty minutes, or even longer. If there is pain at base of the brain or in the pelvic region this same application is invaluable.

The *Thermal bath* (page 118) taken three times a week will be found invaluable in all the ailments of the meno-pause.

Sanguinaria, 2*d*, will give temporary relief from hot flashes. Dose, six pellets every two hours.

Alcohol and aqua-ammonia, equal parts, heated over steam, as hot as can be borne, used as a bath, relieves profuse perspiration. Or rub the entire surface with very *hot fine salt*. Hot baths will be found useful for this also.

THE DIET during the change of life should be

simple, consisting largely of fruits and grains, moderate in quantity. These can be prepared in many palatable and dainty dishes. (See Dietetics.) If one has been accustomed to high living, to rich and greasy food composed largely of the carbonaceous starch, sugar and fat, a change to a simple diet will work wonders in a short time. The whole system will be relieved and a new life will be lived.

The habit once established for a diet that furnishes the nutriment demanded for the system, one cannot be induced to return to that which gorges, stimulates and fattens, but does not nourish. The real relish and gustatory pleasure found in a fruit and grain diet can never be appreciated by those who indulge in inconsistent mixtures of stimulants and disease-producing elements. If there is no appetite, wait for its bidding; do not coax it by stimulants and appetizers. Rest of the digestive organs is often the best and surest cure for many diseases.

Let the woman who is a sufferer from hot flushes, dizziness, neuralgia, etc., give up strong tea and coffee, hot bread, pork, and rich pies and cake. Eat only what the appetite demands; and until the severest symptoms are relieved, partake of food not more than twice a day, and possibly only once. In fasting, if the stomach has a feeling of *goneness* or craving, drink a cup of hot water, hot lemonade or thin gruel made from wheat, barley or oats. A sense of faintness and the inability to omit or postpone a single meal is almost a sure indication of dyspepsia. In hundreds of cases all the symptoms and diseases of change of life will yield to treatment for this common ailment. (Page 42.)

Look to it that a constipated habit is entirely overcome. Study and follow the hints in Chap. V., and the cases are rare that torpidity of the bowels cannot be removed. For any serious illness accompanying the "change of life," a physician should be consulted. In all ordinary cases, however, one can be relieved entirely and that in a short time by religiously following the foregoing advice. Nature is kind and heals all our maladies if we only give her the shadow of an opportunity. In the climacteric period put yourself in harmony with nature's laws and you will have no occasion for the physician's potions.

CHAPTER XXIII.

DIETETICS.

In what thou eatest and drinkest, seek from thence
Due nourishment, not gluttonous delight.
So mayest thou live, till, like ripe fruit, thou drop
Into thy mother's lap; or be with ease
Gathered, not harshly plucked; for death mature.

—MILTON.

DRINKS FOR THE SICK.

LEMONADE.

Juice of half a lemon, one tea-spoon white sugar, one goblet water. Grate into it a little peel if desired.

HOT LEMONADE.

Is made the same way, only using hot water. Is good for colds and biliousness.

ORANGE WHEY.

The juice of one orange to one pint sweet milk. Heat slowly until curds form, strain and cool. Good drink after confinement.

RENNET WHEY.

One quart milk, almost boiling; two table-spoons prepared rennet or a piece of rennet which has been soaked in water. Sugar to taste. Stir the rennet into the milk; let it stand until cool, then strain.

EGG LEMONADE.

White of one egg, one table-spoon pulverized sugar. Juice of one lemon, one goblet water. Beat together. Very grateful in inflammation of lungs, stomach or bowels.

GUM ARABIC WATER.

One tea-spoon gum arabic, one goblet cold water, stand until it dissolves. Flavor with juice of lemon, orange, or any other fruit.

JELLY WATER.

Sour jellies dissolved in water make a pleasant drink for fever patients.

OATMEAL TEA.

Two table-spoons raw oatmeal to one quart cold water, stand two hours in a cool place, then drain off as it is wanted. Nourishing in convalescence, and an unequaled drink for harvesters or moulders.

TOAST WATER.

Toast slowly a thin piece of bread till it is extremely brown and hard, but not black. Put it in a bowl of cold water, and cover tightly. Let it stand an hour before using.

SAGO MILK.

Three table-spoons sago, soaked in a cup of cold water one hour; add three cups boiling milk, sweeten, and flavor to taste. Simmer slowly half hour, eat warm. Tapioca milk is made in the same way.

FLAXSEED LEMONADE.

Two table-spoons of whole flaxseed to a pint of

boiling water; let it stand until cool, then strain and add the juice of two lemons and two table-spoons honey. Invaluable for coughs and suppression of urine.

TAMARIND WATER.

One tumbler of tamarinds, one pint cold water. Turn water over tamarinds, and let it stand an hour; strain before using. Currant jelly or cranberry jelly can be used similarly.—*Mrs. Owens' Cook Book.*

BEEF TEA.

One pound lean beef cut into small pieces, put into a bottle without a drop of water, cover tightly and set in a pot of cold water; heat gradually to a boil, and continue boiling steadily for three or four hours, until the meat is like rags, and the juice all out. Salt to taste.

Beef tea does not afford as much nutrition as people have been taught. It is readily taken up by absorption, and is desirable where a mild stimulant is required. In fevers and inflammations, bran or oatmeal gruel furnish much more desirable nutrition.

BEEF TEA A STIMULANT, AND NOT A FOOD.

Notwithstanding it has been repeatedly shown that beef tea is not a food, the laity, and to a considerable extent the profession, are slow to be convinced. That patients fed on beef tea slowly starve is a fact, which the analysis only too conclusively supports, and which is sustained by accurate clinical observation. In the *Lancet* for October, 1880, p. 562, Mr. G. F. Masterman publishes an analysis, which shows that beef tea has a chemical composition similar to

urine. Beef tea, most carefully prepared, says Dr. Neale in the *Practitioner* (November, 1881), does not contain, including alkaline salts, more than from 1.5 to 2.25 per cent. solid matters, and such matter is mainly composed of urea, kreatin, kreatinin, isolin and decomposed hematin. As a stimulant, beef tea may be, and often is, highly serviceable, but as a means of support during the exhausting drain of a long illness, it does not compare in nutritive value to milk. Dr. Lauder Brunton raises the question whether beef tea, a product of muscular waste, may not under some circumstances be actually poisonous! —*Medical News.*

RICE GRUEL.

Two table-spoons rice, one quart cold water; steep slowly one hour; strain through a gravy strainer; add a little cream and salt.

GRUEL FROM RICE FLOUR.

Wet one table-spoon flour, stir into boiling water, cook five minutes.

CORN TEA.

Parch common corn until browned through, grind, and pour on boiling water. Drink with or without cream. Excellent for nausea, vomiting and diarrhea.

WHEAT, OAT OR BARLEY COFFEE.

Brown the grain thoroughly, and grind. Can be mixed if desirable. Take three table-spoonfuls. Mix with the white of an egg, pour over it one quart of boiling water. When it comes to a boil, set it on the back part of the stove and steep slowly fifteen min-

utes. A nourishing drink and a good substitute for tea and coffee. When made right is very palatable.

BRAN GRUEL.

Boil for half an hour one pint of bran of white wheat, in three pints of water. Strain through a gravy strainer and add a little salt. This is a good gruel for fevers and inflammations. Makes a good drink by thinning and adding lemon juice.

CORN MEAL GRUEL.

One table-spoon finely sifted cornmeal wet in cold water. Have one quart boiling water in a gruel pan, dip a spoonful of this thin cold batter into the water, stir, let it boil up, and then add another spoonful, and so on until the gruel is of the right consistence. Let it boil briskly twenty minutes or more. Salt to taste.

GRAHAM GRUEL.

Make like cornmeal gruel. Can be strained or not, as desired.

OATMEAL GRUEL.

Sift two table-spoons of oatmeal in one quart boiling water. If the meal is coarse, boil one hour and strain through a gravy strainer. Wheatlet gruel prepared in same manner.

MILK PORRIDGE.

One and a half table-spoons flour, wet to a paste, stirred in a quart of boiling milk; add a pinch of salt; can substitute rice flour, oatmeal, arrowroot, corn starch, or the Lockport entire wheat flour.

BAKED MILK.

Put half a gallon of milk in a jar and tie over it

writing paper. Let it stand in a moderate oven eight or ten hours. It will be like cream, and is good for consumptives and invalids generally.—*Mrs. Owens' Cook Book.*

HOT MILK.

Take nine parts of milk and one part of water, and heat to 110° F. in a milk boiler. Sipping this slowly, the saliva combines with the milk, and this with the added water will prevent coagulation in the stomach; hence will be taken up at once by the absorbents. This is valuable food in morning sickness of pregnancy and for nursing women. Is also good in low fevers and nervous dyspepsia.

The *Medical Record*, speaking of hot milk as a beverage, says: "Milk heated to much above 100° F. loses for the time a degree of its sweetness and its density. No one who, fatigued by over-exertion of body or mind, has ever experienced the reviving influence of a tumbler of this beverage, heated as hot as it can be sipped, will willingly forego a resort to it because of its having been rendered somewhat less acceptable to the palate. The promptness with which its cordial influence is felt is indeed surprising. Some portion of it seems to be digested and appropriated almost immediately; and many who now fancy they need alcoholic stimulants when exhausted by fatigue, will find in this simple draught an equivalent that shall be abundantly satisfying, and far more enduring in its effects."

BUTTERMILK.

Buttermilk, when sweet and fresh from the churn, is nutritious and wholesome. It contains about 88

per cent. of water, 4 of nitrogenous food, 3 of sugar, only a trifle of fat, and considerable mineral matter, by some estimated at over 5 per cent. There is also a small amount of lactic acid. As a heat-producing food, it is poor. There are many forms of dyspepsia in which it "will set on the stomach" when hardly anything else will. Often in fevers this organ becomes rebellious from the effects of large amounts of medicine, and it is then a serious question how to nourish the patient. In such cases buttermilk is sometimes found to be the best food that can be given.

In diabetes it may be employed as a chief article of diet to great advantage. Corpulent people who will not adopt the bread and fruit regimen and take much exercise, may use buttermilk in preference to milk. It may be put in clean bottles and canned or sealed, as in preserving fruit, and kept for a long time. After a little, one becomes fond of the taste and relishes it. It ought not to be allowed to stand till it is bitter before using.—*Dr. Holbrook.*

BUTTERMILK POP.

Put one quart of buttermilk in the milk boiler. When nearly boiling, add two table-spoons flour which has been rubbed with one tea-spoon of milk. Stir until boiling. Good in nausea and heartburn of pregnancy. Also for nervous dyspepsia. I knew one man that lived on buttermilk pop alone for six months, and cured himself of dyspepsia.

CHICKEN BROTH.

In one quart of water boil the dark meat of half a chicken with a table-spoon of rice or barley; skim off

the fat; use as soon as the rice is well done. When taken up add a few narrow strips of bread toasted—not too brown.

MACARONI SOUP.

Into a quart of boiling water put a handful of macaroni broken into inch pieces. Let it boil an hour, then add two cups of strained stewed tomato, and just before serving pour in half a cup of cream. It is delicious.

FARINA SOUP.

Add to any kind of soup stock one half cup of farina, the same of cream, or an egg well beaten, and let it cook gently half an hour before serving.

TOMATO SOUP.

Put one pint of canned or fresh tomatoes and one quart of water, in a granite stew pan. When boiling, thicken with three table-spoons of graham flour mixed with cold water. Add one quart milk and stir until it boils; this prevents curdling. Season to taste. Can be made in ten minutes.

PUREE OF SPLIT PEAS.

One cup of split peas. Soak over night. Put on in cold water. Boil two hours slowly. Put through the colander. Heat in the kettle a cup of sweet cream, into which has been stirred two large spoonfuls graham flour, and a pinch of salt. When it thickens, return the peas to the kettle and stir. Then set back.

LEMON JELLY.

Moisten two table-spoons corn starch, stir into one pint boiling water; add the juice of two lemons and

one-third cup of sugar. Grate in a little of the rind. Put in moulds to cool.

LEMON GELATINE.

Soak one ounce of gelatine in a quart of water. When dissolved, pour it in a saucepan and let it come to a boil. Add the juice of three lemons, a little grated rind, and one cup of sugar. Strain through a thin cloth, put into moulds, and set on ice to cool.

SAGO JELLY.

Soak five table-spoons sago in half a pint cold water thirty minutes, then add one cup sugar and two table-spoons lemon juice. Pour over three cups boiling water; boil the whole in a farina boiler one hour; pour into moulds; when cold turn out and serve with fruit juice.

SAGO CURRANT JELLY.

Soak in cold water five table-spoons sago one hour; strain off the water, add half pint currant juice (strained); boil slowly fifteen minutes, stirring occa sionally, then add half a cup sugar. Pour into moulds; serve the following day without sauce. Cranberries or other acid fruits can be used. Makes a very tempting dish for an invalid.

NUTRINA OR BRAN JELLY.

1st. Go to the mill *yourself*, and watch the miller while he gives you clean wheat bran.

2d. Have a kettle of boiling soft water on the stove. Sift in with one hand, stirring briskly all the while with a paddle or wooden spoon, held in the other, until the mass is about the consistency of a

thick gruel. Let this boil slowly two hours. Place a sieve over the top of a pan, and pour this gruel in it to drain. When well drained place the pan on the stove, and allow it to come to a boil. Mix with cold water a spoonful or so of sifted graham flour, enough to bring the boiling gruel to about the consistence of a smooth gravy, or thick gruel.

Dip into moulds—coffee cups are nice for this—and allow to become cold, when, if right, it will be a trembling, delicate jelly. Perhaps it will be necessary to experiment a little, as the first trial may not be entirely successful, but depend upon it, the outcome is well worth painstaking.

Nutrina accompanied with various sauces makes a welcome dessert. People who use milk or cream would like nutrina with a cream sauce. Nutrina can not be too highly recommended, for it suits so wide a range of conditions.—*Dr. M. Augusta Fairchild.*

Nutrina contains the phosphates of the grain, hence is a valuable nerve nutritive. Is especially excellent for nursing mothers, and children when first weaned.

CEREALS.

Every table should be abundantly supplied with well-cooked cereals. Cook in a farina or milk boiler. No housekeeper should be without this important utensil. Do not soak in cold water over night. All the cereals, even rice, are far better to be put to cook in boiling water. This bursts the starch cells at once, and prevents the raw taste and stringy, dark look these preparations frequently have. Should not be stirred while cooking, as it breaks the grains and makes them pasty.

CRACKED OR ROLLED WHEAT.

In two quarts boiling water, stir one pint cracked wheat. Half tea-spoon salt. Use a farina boiler or double kettle, and cook three hours without stirring. When done, mould in dishes. Eat hot or cold with fruit sauce or cream and sugar. Excellent in constipation or biliousness. The rolled wheat is preferable. Not being able to procure it ready prepared, one can crack wheat in an ordinary coffee mill.

OATMEAL MUSH.

Coarse oatmeal should be cooked like rolled wheat. If desired warm for breakfast, can be left in a granite or porcelain farina boiler over night, and heated in a few minutes. Do not soak oatmeal over night, nor try to cook it sufficiently in the morning. It must never be stirred while cooking. Fine oatmeal can be made in a mush, like Indian meal, and be ready for the table in twenty minutes.

INDIAN MEAL MUSH.

Take fine meal of northern corn, a little salt; stir slowly in boiling water until it is as thick as can be stirred easily. Stand it on back of the stove and cook slowly one hour. Is better cooked in a milk boiler.

GRAHAM MUSH.

Stir graham flour in boiling water slowly until it makes a thick batter. Set on the back part of the stove ten minutes, then beat two minutes and turn into the dish. To be eaten with fruit juice or cream and sugar.

FARINA MUSH.

Stir a half cup of farina slowly into a quart of

boiling water; cook fifteen minutes in a milk boiler without stirring: add one-half cup of cream just before removing from the fire. Serve with stewed fruit or fruit sauce.

HOMINY.

Mix one cup of hominy with three and a half cups boiling water, a little salt. Cook in farina boiler four hours. Delicious eaten with milk with or without sugar.—*Hygienic Cookery.*

WHEATLET MUSH.

Use water, or equal parts of milk and water. Salt to taste. Have it *boiling, foaming, scalding* hot, then sprinkle into it from the hand sufficient wheatlet to make a thin pudding.

Keep it boiling hard for five minutes. Then set it back to cook slowly ten minutes longer.

WHEATLET BLANC MANGE.

Pour wheatlet mush into forms and serve cold.

WHEATLET PUDDING.

Break up cooked wheatlet with a fork, add milk enough to make a thin pudding; two eggs, currants and raisins to suit. Brown in a moderate oven.

WHEATLET AND APPLE PUDDING.

Make as cracked wheat pudding, (page 311.)

GRANULA.

Take equal parts of graham flour, fine oatmeal and cornmeal, mix to a batter thick enough to cling to the spoon. Bake in thin cakes in a quick oven.

When baked, break into pieces and dry out thoroughly in a slow oven until crisp. Then roll with the rolling pin into fine crumbs. Delicious eaten in milk. Many families prepare it from their cold gems, bread and corn bread, thus finding an economical use for "dry bread."

RICE AND APPLE PUDDING.

One quart boiled rice, three pints tart chopped apples, half cup sugar, put in layers in earthen baking dish, add half cup water, and bake two hours slowly. Raisins, plums or prunelles can be used to flavor if desired. Serve warm or cold, with cream.

RICE AND RAISINS.

Three cups boiling water, one cup sweet milk, one cup rice, half cup raisins. Mix well together. Cook in steamer or farina boiler. Mould and eat warm or cold, with cream or fruit sauce.

RICE SNOW.

One quart sweet milk, five tablespoonfuls rice flour or corn starch, one-half cup sugar, whites of four eggs. Boil the milk, stir in the rice flour moistened, and add the sugar. When cold whip a little at a time into the eggs, after they are well beaten. Mould and serve with cream or fruit sauce.

RICE SNOW BALLS.

Two quarts boiling water, one pint boiling milk, two cups rice; cook two hours in farina boiler without stirring. Mould in small cups, and serve with boiled custard or fruit sauce.

RICE GRIDDLE CAKES.

Two cups boiled rice, one cup sweet milk, two eggs, one cup sifted flour. Bake slowly.

RICE OMELET.

Two cups boiled rice, one cup sweet milk, two eggs. Stir together with egg beater, and put into a hot buttered skillet. Cook slowly ten minutes, stirring frequently.

RICE AND BERRY PUDDING.

Two cups sweet milk, two cups cold rice, samp or barley; two cups blueberries, currants, strawberries, seeded cherries or chopped apples; one-third cup sugar, two eggs—yolks and whites separate. Time, one hour; slow oven. Soften the cold rice (or other grain) with the milk, working out all the lumps; then stir in the yolks and sugar beaten together, and also the well-whipped whites. Add the fruit, mixing it in lightly; pour the batter into a dish, set in a dripping pan of boiling water, and bake slowly one hour. Serve cold or lukewarm, with or without a dressing of cream.—*Health in the Household.*

BROWNED RICE.

Parch or brown rice slowly; steep in milk for two hours. The rice or the milk only is excellent in summer complaint.

RICE CREAM.

Thicken a pint of new milk with rice flour to the consistency of cream; sweeten and flavor to taste. Beat the whites of two eggs to a stiff froth, put a half ounce of gelatine to half pint of cold water; when

well soaked, place over the fire until the gelatine is dissolved; when cool, beat to a froth with an egg-beater; mix with the egg.

BOILED RICE.

Put two cups of rice to three pints of boiling water, half teaspoon salt. Cook in a farina boiler four hours.

RICE.—JAPANESE METHOD.

Only enough water is poured on the rice to prevent burning. Cover tightly and set over a moderate fire until nearly done. Remove cover to allow moisture to escape. The rice turns out a mass of snow-white separate kernels, each burst open like a mealy potato.—*Hygienic Cookery.*

It is far less trouble to cover the dish tightly and cook it in a steamer.

BREAD.

Bread is the representative of human food, because wheat, of which it is made, embraces all the elements of nutrition necessary to build up and sustain every part of the system, keeping it in good working condition and preserving it unimpaired to ripe old age. It is the only single article of food upon which man can live after he is weaned without danger of impoverishing his system.

Bread to serve the best purposes of nutrition should contain all the elements of the grain. White bread that holds a popular place as an article of diet, is greatly deficient in the nitrates or muscle feeding elements. The gluten of the grain, in which these are found, is removed in the bran. Besides, fermentation of flour is at the expense of the gluten. Consequent-

ly to obtain bread that contains all the elements of nutrition in the right proportion, it must be made from the popular graham or Lockport entire wheat flour, and not raised with yeast or chemicals. If raised with yeast, the less number of times it is mixed the better. The most popular unleavened breads are gems, muffins and rolls.

GRAHAM GEMS.

Take three cups of entire wheat flour or graham made from white wheat, two cups of cold water, half cup of milk. A little more wetting may be needed for graham. Omit salt. Heat gem pans very hot on the top of the stove, fill them even full with the batter, place on the grate of a very hot oven. Let them remain ten minutes, then bake thirty minutes on the bottom of the oven. The "acorn" gem pans are essential. These are small, round, deep iron pans. Notice, three things are necessary for good gems: The *best white wheat* flour, *very hot* pans and oven, and the "acorn" gem pans. No beating is required. These conditions observed, the gems will be as light as sponge cake. They can be eaten warm or cold, but are best heated over in a quick oven. They make excellent toast and pudding. I was many years in learning to make good gems without yeast or soda. This receipt never fails, even with a "green" cook.

GRAHAM MUFFINS.

Take one pint of new milk, one pint graham or entire wheat flour. Stir together and add one beaten egg. Can be baked in any kind of gem pans or muffin rings. Salt must not be used with any bread that is made light with egg.

UNLEAVENED BREAD.

Mix entire wheat flour with ice cold water, to a stiff dough; knead for four or five minutes; cut in small pieces and roll into cakes size of clothes-pins. Bake on wire pan or toaster in hot oven, leaving room to rise. Very light and sweet. An addition of raisins and hickory nut meats is much enjoyed.—*Mrs. Purdy.*

OATMEAL AND GRAHAM GEMS.

Mix equal parts of graham and fine Irish oatmeal into a thick batter, with equal parts of milk and water, fill hot gem pans, and bake with a brisk heat. Very sweet and tender.—*Dr. Holbrook.*

WHITE FLOUR GEMS.

Stir briskly into new milk, or milk and water, sufficient flour to make a batter not too stiff to drop from a spoon—much depends on the consistency; experiment only will decide. Add the whites of two eggs whipped to a stiff froth and beat all together thoroughly. A little cream put in at the last makes the gems more tender. Bake in hot gem pans in a quick oven.

BROWN GEMS.

Mix with water equal quantities of rye and Indian meal, beat it to a cream, perhaps ten or fifteen minutes, bake in thin cakes in flat gem pans.

BEST GRAHAM BISCUIT.

Make as thick a graham mush by stirring the flour into boiling water, as is possible, then take it from the stove to the moulding board, knead into it more

graham flour, roll about an inch thick, cut into biscuits, and bake in a hot oven.

LIGHT GRAHAM BISCUITS.

Make the dough of graham yeast bread a trifle stiffer, roll and cut into biscuits. When light, bake thirty minutes.

DELICIOUS CORN BREAD.

One quart corn meal, partly scalded with one pint boiling water. Add to this one pint sweet milk, stir to a smooth batter, dip a large cooking spoonful at a time on your hot griddle in separate cakes, let it stand to get the lower crust well started, then place the griddle in the hot oven, on the top grate, and allow the baking to be finished there. The cake should be a nice brown. About half an hour's time will be required for baking.—*Dr. M. A. Fairchild.*

OATMEAL CAKE.

Take one pint of fine oatmeal, and warm water enough to stir up a batter, like griddle cakes. Pour it into a shallow baking pan or griddle, and bake twenty minutes in a hot oven. Or bake in small cakes on the griddle, first putting in a handful of wheat flour and a little more water.

BOSTON BROWN BREAD.

Three cups graham flour, one cup Indian meal, one cup molasses, two cups sweet milk, one cup sour milk, one teaspoon soda. Steam three hours and bake two hours.

GRAHAM BREAD.

Soak half a cake of compressed yeast, stir it into

one quart warm water and two quarts graham flour. Put into a deep sheet iron bread pan which has been well greased. When light, bake one hour or more. If compressed yeast cannot be obtained, use home-made or baker's yeast. The dough should be as stiff as can be stirred with a spoon. Make bread from fine flour of the entire wheat the same way, only a trifle stiffer.

YEAST BREAD FROM WHITE FLOUR.

Make a sponge by boiling one pound of potatoes in two quarts of water; stir up a pint of sifted flour as for starch, and pour the boiling water over it, adding the potatoes when well mashed; when cool, add a cup of yeast, or two ounces dried yeast soaked, and a table-spoon of salt. Make this the day previous to baking; it will save labor to do it the same time you boil potatoes for dinner.

To make the bread, take three quarts sifted flour warmed, and wet with the sponge, adding no more liquid or salt; knead at least half an hour, keeping the dough soft and warm; put it in the baking pans, which are well greased, and when it is light it is ready for the oven. Bake forty minutes. The dough must be soft and *thoroughly* kneaded.

This method preserves the gluten.

OATMEAL SNAPS.

Mix one cup sweet cream and three table-spoonfuls sugar; add fine oatmeal till stiff; knead slightly; roll to the thickness of an eighth of an inch; cut in shapes; bake crisp in moderate oven.—*Hygienic Cookery.*

GRAHAM FRUIT CRACKERS.

Two-thirds cup sweet cream; one cup dried currants, picked and washed, one-fourth tea-spoonful soda, one-half tea-spoonful cream tartar. Use equal parts graham and white flour to make a very stiff dough. Roll out less than an eighth of an inch in thickness. Cover thickly with the fruit. Lay on another sheet of the dough, pass the rolling pin over it. Cut in shapes; prick deeply; bake in a moderate oven thoroughly.—*Hygienic Cookery.*

GRAHAM WAFERS.

Take graham flour. Mix with pure cold water. *No salt.* Knead thoroughly fifteen minutes, roll very thin, about half as thick as soda crackers; cut in two inch squares, and bake quickly. These will keep for months in a dry place. It makes them crisp to place them in the oven a few minutes before bringing them to the table. Better if made by a baker, using the cracker machine. These are the best dyspeptic bread made, and are soon relished by all who eat them.

GRAHAM CRACKERS.

Take one part cream to four parts milk, mix with flour, as soft as can be handled; knead twenty minutes; roll very thin; cut square or round, and bake quickly twenty minutes. Handle carefully while hot; pack away when cool in a stone jar.

RICE MUFFINS.

One cup of boiled rice, two eggs, two cups of sweet milk, two cups of flour. Beat well. Bake in gem pans or muffin rings.

BUCKWHEAT CAKES.

One quart of warm water, one quart of buckwheat flour, a cup of bread sponge, one tea-spoon salt. Make over night, or will rise in three or four hours in the daytime. Some batter being left will raise cakes the following day.

Buckwheat contains a large proportion of gluten and is very desirable for batter cakes. It has been brought into disrepute for two reasons: First, sufficient pains has not been taken to cleanse out the smut of the grain, which is poisonous, producing eruptions, etc. Second, too much butter and syrup are consumed with the cakes, supplying to the system a superabundance of carbon. Substitute honey or fruit sauce to make the cakes relish.

WHEATLET CAKES.

Make like buckwheat cakes. These are delicious, and are destined to become very popular.

GRIDDLE CAKES FROM "SHORTS."

Shorts, or middlings, are obtained in grinding wheat, between the fine flour and bran. These are rich in gluten, and, prepared in the same way, make cakes equal to buckwheat. Not being able to procure *shorts*, use graham, wheatlet, or entire wheat flour.

RICE GRIDDLE CAKES.

One cup boiled rice, one egg, one cup sweet milk, one cup water, two cups of white flour, entire wheat flour or "shorts."

CORN GRIDDLE CAKES.

Pour boiling water on a pint of corn meal to make

a stiff batter; let it stand over night. In the morning add one cup of graham flour and one cup of sweet milk. If not light, add a tea-spoon of baking powder; except in cold weather the corn will ferment sufficiently to make it light. Can be baked in gem pans if preferred.

BREAKFAST PATTIES.

Make a thick gruel of equal parts of graham and corn meal. Let it stand over night. Add sifted graham flour, or flour of the entire wheat, until the batter is thicker than for batter cakes. Bake as griddle cakes, giving them plenty of time. If just right, most delicious breakfast cakes.

MILK TOAST.

Heat six slices of graham or entire wheat bread in the oven; toast an even brown over coals. Boil one pint of milk and half a cup of cream. Thicken with one tea-spoon corn starch; half a tea-spoon salt. Pour over the toast and serve hot.

GEM TOAST.

Split graham gems, toast the same as the bread, and cover with the same dressing. This is the best toast made. Is not harmed by standing.

OYSTER TOAST.

Pour stewed oysters over graham gems or bread toasted. An excellent breakfast dish.

CODFISH TOAST.

Toast graham bread or gems; lay upon a platter and cover with codfish prepared in milk.

TOMATO TOAST.

Stew one quart tomatoes; seasoned with one table-spoon sugar and half a tea-spoon salt; pour over graham bread or gems toasted.

EGGS ON TOAST.

Soften brown bread toast with hot water, put on a platter and cover with poached or scrambled eggs.

ASPARAGUS ON TOAST.

Cut the green of one pound of asparagus in one pint hot water. Stew thirty minutes, add half a cup of cream, a little salt, turn over graham toast.

RHUBARB TOAST.

Take one pint water, half a cup of sugar; when boiling, put in two pounds rhubarb cut in small pieces. Stew until done; when cold, pour over a platter of hot toasted graham bread, having a little butter upon it. This is an excellent breakfast dish, and as the toast absorbs the peculiar rhubarb flavor, can be eaten by those who usually dislike it.

Gooseberries, tart apples, peaches and other acid fruits can be prepared in the same way.

NOTE.—Never use white bread for toast when bread of the unbolted or entire wheat flour can be had. The latter never becomes doughy, and is much better flavored, besides being more nutritious.

EGGS AS FOOD.

Eggs, at average prices, are among the cheapest and most nutritious articles of diet. Like milk, an egg is a complete food in itself, as is manifested from the fact that from it a chick draws all the nourish-

ment needed in its development. This is one of the mysteries of nature that the yolk and white of an egg can contain elements capable of producing so many and such varied parts as constitute a living fowl. An egg is easily digested if not damaged in cooking. Indeed, there is no more concentrated and nourishing food than eggs. The albumen, oil and saline matter are, as in milk, in the right proportion for sustaining animal life. Two or three boiled eggs, with the addition of a slice or two of toast, will make a breakfast sufficient for a man, and good enough for a king.

Three and one-tenth pounds of corn will produce, when fed to a hen, five-sixths of a pound of eggs; but five-sixths of a pound of pork requires about five pounds of corn for its production. Taking therefore into account the nutriment in each, and the comparative prices of the two on an average, the pork is about three times as costly a food as the eggs, while it is certainly less healthful.—*Boston Journal of Chemistry.*

BOILED EGGS.

An egg should never be boiled. Immersed in boiling water for a few moments the white part coagulates and becomes hard, and more or less indigestible. If cooked at a temperature of 165° for fifteen or twenty minutes the white part coagulates into a tender, delicate, jelly-like substance, which is not only very digestible but delicious, while at the same time the yolk becomes sufficiently hard. If placed in boiling water and set back for ten minutes it will cook to perfection. A little experience will enable any one to do it successfully.

POACHED EGGS.

In a skillet of salted boiling water, place muffin rings. Drop the eggs in them and let them stand ten minutes without boiling. Remove the rings, and the eggs will be nicely moulded and evenly cooked.

EGGS POACHED IN MILK.

Take one cup of milk, half a cup of water, when boiling break in six eggs. Cook slowly and serve on toast. A lady told me she cured herself of nervous headaches by eating an egg every morning cooked in this way. The milk prevents the poisonous effect of the sulphur in the egg, and the nerves get decided nutriment.

SCRAMBLED EGGS.

Beat six eggs and one cup of milk together. Cook in a buttered skillet, stirring occasionally. Take up before it is quite thickened.

STEAMED EGGS.

Break into egg cups and steam ten minutes.

EGG OMELET.

Beat the whites of six eggs separately. Beat the yolks with three table-spoons of milk and one table-spoon of flour; stir the whites in lightly. Cook in a hot buttered skillet. When the edge is cooked, turn over carefully. In two minutes more, double together on a hot platter. Use no salt.

RAW OYSTERS.

It is an old theory that a raw oyster digests itself. This is owing to the diastase or glycogen in the liver.

A fat oyster is half liver. Cooking destroys this diastase. So also much vinegar and condiments make it slow to assimilate. Alcohol also destroys the diastase. Valuable in nervous dyspepsia, and consequently useful in the early months of pregnancy.

STEWED OYSTERS.

Take one pint of milk, one cup of water, a tea-spoon of salt; when boiling, put in one pint of bulk oysters. Stir occasionally and remove from the stove before it boils. An oyster should not be shriveled in cooking.

BROILED OYSTERS.

Put large oysters on a wire toaster. Hold over hot coals until heated through. Serve on toast moistened with cream. Very grateful in convalescence.

GRAHAM GEM PUDDING.

Take six cold gems, baked the day before, break into small pieces and pour over them a pint of hot water and half cup of sugar; stir in six large tart apples, cut in thin slices. Bake two hours. Other fruits are sometimes used.

CRACKED WHEAT PUDDING.

In a deep two quart pudding dish put layers of cold cooked cracked wheat, and tart apples sliced thin with four table-spoons sugar. Raisins can be added if preferred. Fill the dish, having the wheat last, add cup of cold water. Bake two hours.

FARINA BLANC–MANGE.

Stir into a quart of boiling milk, farina enough to make a thin pudding, then set away to cool. Before

the farina is quite cold, stir in the yolk of one egg and a little sugar, then add the whites of two eggs whipped to a stiff froth, and beat thoroughly. It is more creamy if not made too thick with farina. Serve cold with fruit or jelly.

RICE PUDDING.

One quart new milk, two table-spoons rice, two table-spoons sugar, pinch of salt, one tea-spoon lemon extract, or if preferable, half cup of raisins. Bake three hours in a moderate oven.

For summer it is delicious cold. Better made in a large quantity.

APPLE TAPIOCA PUDDING.

Soak a tea cup of tapioca in a quart of warm water three hours. Cut in thin slices six tart apples, stir them lightly with the tapioca, add half cup sugar. Bake three hours. To be eaten with whipped cream. Good either warm or cold.

INDIAN FRUIT PUDDING.

One pint cornmeal mush made with water. Add one pint stewed dried apples, peaches or prunes, one half pint water, one cup sugar. Stir ingredients well together. Bake five hours.

ORANGE PUDDING.

Pare and slice five large oranges, removing seeds. Lay in a deep dish and sprinkle with half cup sugar, let them stand two hours. Make a custard of one pint milk, yolks of three eggs, two table-spoons corn-starch; when cool, pour over oranges. Beat the whites with two table-spoons of powdered sugar and place on the top; brown quickly in the oven.

CORN MUSH PUDDING.

One quart milk, one pint corn mush (page 296), two-thirds cup molasses, one tea-spoon cinnamon. Bake four hours.

BAKED INDIAN PUDDING.

Boil one quart of milk, stir in seven table-spoons meal. Take from the stove, add one quart cold milk, one cup molasses, one tea-spoon ground mace. Bake in an earthen pudding dish five hours. Double the recipe makes a better pudding, and it is good cold.

MOTHER'S APPLE PUDDING.

One pint rolled bread-crumbs; two pints tart apples, chopped; one cup seedless raisins, half a cup sugar. Place in layers in an earthen pudding dish; add one cup water; bake slowly two hours. Requires no sauce. Peaches, cherries, plums, etc., can be used in place of apples, and also stewed dried fruits.

HUCKLEBERRY BREAD PUDDING.

Heat one quart milk and pour it over one pint dry graham bread-crumbs; cool, add two beaten yolks, three table-spoons sugar, two well-whipped whites. Stir in one pint huckleberries, dredged with flour, bake in a pudding dish, set in a pan of boiling water, forty or fifty minutes.—*Hygienic Cookery.*

PLUM PUDDING.

One cup seedless raisins, one cup currants, one quart chopped apples, one cup sugar, one cup graham flour mixed in a pint of water. Mix all together, and bake five or six hours.

STRAWBERRY DESSERT.

Place alternate layers of hot cooked cracked wheat and strawberries in a deep dish; when cold, turn out on platter; cut in slices and serve with cream and sugar, or strawberry juice. Wet the moulds with cold water before using. This, moulded in small cups, makes a dainty dish for the sick. Wheatlet can be used in the same way.

PIES.

A very palatable pie crust can be made of sweet cream and graham or entire wheat flour. Should be worked soft, made thin, and baked in a hot oven. Eaten the day it is baked. In a dietetic point of view there is little objection to this crust. Any acid fruit can be used for the filling. A crust of fine flour and lard does not make suitable nutriment for sick or well.

PIE FOR DYSPEPTICS.

Four table-spoons of oatmeal, one pint of water; let stand for a few hours, or till the meal is swelled. Then add two large apples, pared and sliced, a little salt, one cup of sugar, one table-spoon flour. Mix all well together and bake in a buttered dish; makes a most delicious pie, which can be eaten with safety by the sick or well.—*Dr. Holbrook.*

STRAWBERRY PIE.

Place the under crust upon a deep plate, and the upper one—cut just the right size—on a flat tin or sheet iron; prick to prevent blistering, and bake. Fill the deep crust while hot with strawberries, and cover with the flat crust. If the fruit is rather hard, re-

place in the oven till heated; if quite ripe, the crust will steam sufficiently.

Raspberry and blackberry pie can be made in the same way. The flavor of these delicious berries, when quite ripe, is greatly impaired by cooking; they are also changed to a mass of little else than seeds and juice.—*Mrs. Cox's Hygiene Cook Book.*

APPLE PIE CAKE.

Of flour of the entire wheat and cold water, make a batter soft enough to level itself. If shortening is desired use sweet cream. Fill a deep pie-platter a third full of the batter, sprinkle over a little sugar. Wash, quarter, and core tart apples and place as many in the batter (skin side up) as it will hold. Press down and level with a spoon. Over the top sprinkle sugar and bake till brown.—*Dr. Holbrook.*

CAKE.

Cake is hardly considered a dietetic food. A few recipes, however, are given that experience has proved good, and may be eaten by convalescents or invalids at the seaside or in the mountains.

STRAWBERRY SHORT-CAKE.

Bake a short-cake in three thin layers. Then put strawberries between, having them mashed and sweetened, and on the top layer, and all about the side of a dish, put your finest large berries. This needs no sauce.

We also make a simple pudding which is well cooked cracked wheat, with the whole berries stirred in when done, and put in moulds. To be

eaten cold. Rice and corn mushes may be treated in the same way.

But best of all, is strawberries and plain unleavened bread. This exceeds in wholesomeness, and really in gustatory delight, all the ways that man has invented to punish strawberries.—*Dr. Fairchild.*

The short-cake should be made of cream and graham or entire wheat flour.

GRAHAM CAKE.

One cup sugar, two eggs, half a cup sweet cream, one cup of flour, one tea-spoon of baking powder. Bake in a deep tin. Adding currants and chopped raisins and baking in small cake tins makes a nice children's cake.

EUREKA SPONGE CAKE.

Four eggs beaten with one and a half cups of sugar, two cups of sifted flour, baking powder and lemon extract, each one tea-spoon. Beat thoroughly together, and add three-fourths cup of boiling water. Is very thin, but makes a delicious and wholesome cake. Is good made from white or graham flour. Makes a nice layer cake by baking it in jelly tins.

CORALINE CAKE.

Half a cup of sweet milk, half a cup of rich cream, one cup of sugar, one egg, two cups graham or entire wheat flour, one tea-spoon baking powder. Bake in two pie tins. When done split open with a sharp knife, and fill in with raspberry or strawberry juice that has been thickened with corn starch or gelatine. By using boiled custard for filling it will make what cooks call a French pie.

GRAHAM FRUIT ROLL.

To two and a half cups sifted graham flour add three cups sifted white flour. Mix with two cups sweet cream, one tea-spoon soda and two of cream tartar. Roll the dough into two oblong sheets about a quarter of an inch thick. Put layers of fruit between and on them, using one cup each of chopped raisins and dried currants. Roll closely, pinching the ends firmly together to secure the fruit. Bake in a moderate oven one hour.—*Hygienic Cookery.*

HUCKLEBERRY CAKE.

Beat together one-half cup butter and two of sugar. Then add one cup sweet milk, three of flour, and four eggs. One tea-spoon of soda dissolved in a little hot water. Add last one quart ripe berries.

FRUIT SAUCE.

Boil the juice of any acid fruit, adding an equal part of water. To one pint put one table-spoon of sugar and one tea-spoon corn starch. This makes a clear juice about the consistence of syrup, and is very desirable to eat with wheat, mush, gems, griddle cakes and plain puddings. Jellies and jams can be made into fruit sauce by adding four parts of water, and thickening. Will not require sugar. These are valuable sauces for invalids and children. Once learning how delicious they are, persons in health will demand them. In many of the small fruits the seeds are very objectionable. This method of using the fruit obviates that.

PEACHES A LA STRAWBERRY.

Ripe peaches cut in small pieces, with soft, mild

eating apples, in the proportion of three peaches to one apple, mixed with sugar, and left to stand two or three hours, makes excellent mock strawberries.—*Kansas Home Cook Book.*

BAKED APPLES.

Pare tart apples; core with a corer or small knife. Place them in pans, and fill cavities with sugar. Bake in a *slow* oven until tender. If sweet apples are used, it is better not to pare; sugar not needed.

APPLE SNOW.

Take apples, not very sweet ones, and bake till soft and brown. Then remove the skins and cores; when cool, beat them smooth and fine; add half cup of granulated sugar and the white of one egg. Beat till the mixture will hold on your spoon. Serve with soft custard.—*V. Mills.*

BAKED PEARS.

Take a stone jar, and fill it with alternate layers of pears (without paring) and a little sugar, until the jar is full, then pour in as much water as the jar will hold. Bake in a moderate oven three hours.—*Kansas Home Cook Book.*

BAKED PIE-PLANT.

Cut two pounds of pie-plant into a pudding dish, sprinkle over it half a cup of sugar and half a cup of rolled bread crumbs or granula. Add water until the pie-plant is two-thirds covered. Bake in a quick oven, thirty or forty minutes. This method of preparing pie-plant removes the medicinal taste, and makes an acceptable spring dish.

FRUIT BLANC-MANGE.

One quart of juice of strawberries, cherries, grapes, or other juicy fruit; one cup water. When boiling, add two table-spoonfuls sugar, and four table-spoonfuls corn-starch wet in cold water; let boil five or six minutes, then mould in small cups. Serve without sauce, or with cream or boiled custard. Lemon juice can be used the same, only requiring more water. This is a very valuable dish for convalescents and pregnant women, where the stomach rejects solid food.

FRUIT ICE.

Apples, pears, quinces, or any fruit grated fine; sweetened to taste, and frozen is delicious. May be taken where there is fever or inflammation.

GRAVY FOR CHILDREN.

Stir a heaping table-spoon of whole wheat flour smoothly in half cup cold milk. When a pint of milk boils, stir the above in slowly; add a half tea-spoon salt. To prevent burning, melt a little butter in the spider before pouring in the milk. It is more nutritious and wholesome than meat gravy.

MACARONI, STEWED.

Cover half pound of macaroni with plenty of boiling water and stew slowly two hours, without stirring. Before taking up, season with salt and cream.

MACARONI, BAKED.

Break in small pieces half a pound of macaroni; mix with a half cup of shavings of cheese and a half tea-spoon salt. Put into a baking-dish, cover with boiling milk or water, and bake two hours in a mode-

rate oven. If cheese is not relished, use bread-crumbs and cream instead.

CRACKER OMELET.

Break one quart of oyster crackers in small pieces; pour over them one pint of hot milk, with half teaspoon salt. Stir in three eggs well beaten and put into a hot buttered skillet. Cook slowly ten minutes, stirring frequently.

TOMATOES WITH CORN.

Cook the tomatoes half an hour; then add one-third as much green corn, cut from the ear. Stew slowly for a half hour, stirring occasionally.—*Hygienic Cookery.*

SCALLOPED TOMATOES.

Place in a pudding dish alternate layers of tomatoes and bread-crumbs, or thin slices of toast, letting the topmost layer be tomatoes. Add a little salt. Bake slowly, covered an hour or more; uncover and brown ten minutes.

A FAMILIAR LETTER

TO THE READER FROM THE AUTHOR.

In presenting a revised edition of *Tokology*, the author takes the liberty of responding to inquiries upon different subjects of vital importance.

"Can a law be given for regulating the sex of offspring?" This is a subject which has elicited much study and discussion among physiologists. Various theories have received the support of investigators.

Dr. Sixt, a German physician, asserts that the right testicle and the right ovary secrete the male principle, and the left the female, and that in coition the sperm is injected from one testicle only. He claims that experiments upon animals prove his theory; that whenever the left testicle is removed, the animal begets males only, and when the right one is wanting, females.

Mrs. Duffey, in mentioning this theory, very shrewdly adds: "He does not, however, tell us what would be the result if the germ and the sperm should proceed, the one from the right ovary and the other from the left testicle."

The fact also remains that a man who has been deprived of one testicle has become the father of children of both sexes. Also, that a woman having lost one ovary has conceived and brought forth both sons and daughters.

Prof. Thury, of Geneva, gives the following theory: That if impregnation takes place immediately or very soon after menstruation, the child will be a female; but if not till some days later, the child will be a male.

This theory is pretty generally depended upon by stock-breeders, who claim that *early* union after *heat* produces *females*, while *late* produces *males*. Yet Darwin affirms that the results of experiments have gone far to disprove Thury's theory.

Girou, a French scientist, as well as some French and German physiologists, claims that experiments show that if the male is older and stronger than the female, the offspring will be more largely males, and *vice versa*.

Samuel Hough Terry gives as a tested and proved theory that if the wife is in a higher state of sexual vigor and excitement at the time of conception, boys will be conceived; but if the reverse is true, girls will be the result.

A study of these various theories confirms our doubts as to whether the true law has as yet been discovered. If, as I believe, sex is in the soul, then the sex of offspring must be determined by a law of the soul. So far human knowledge has not arrived in its investigations at sufficient data for understanding that law.

The probabilities are that it will eventually be proven that the parent whose mental forces previous to, and at the time of conception, are most active and vigorous, controls the sex of the child.

Facts proving any of the above theories are solicited.

The *desirability and practicability of limiting offspring* are the subject of frequent inquiry. Fewer and better children are desired by right-minded parents. Many men and women, wise in other things of the world, permit generation as a chance result of copulation, without thought of physical or mental conditions to be transmitted to the child. Coition, the one important act of all others carrying with it the most vital results, is usually committed for selfish gratification. Many a drunkard owes his life-long appetite for alcohol to the fact that the inception of his life could be traced to a night of dissipation on the part of his father. Physical degeneracy and mental derangements are too often caused by the parents producing offspring while laboring under great mental strain or bodily fatigue. Drunkenness and licentiousness are frequently the inheritance of posterity.

Future generations demand that such results be averted by better pre-natal influences. The world is groaning under the curse of chance parenthood. It is due to posterity that procreation be brought under the control of reason and conscience.

It has been feared that a knowledge of means to prevent conception would, if generally diffused, be abused by women; that they would to so great an extent escape motherhood, as to bring about social disaster.

This fear is not well founded. The maternal instinct is inherent and sovereign in woman. Even the pre-natal influences of a murderous intent on the part of parents scarcely ever eradicate it.

With this natural desire for children, we believe

few women would abuse the knowledge or privilege of controlling conception. Although women shrink from forced maternity and from the bearing of children under the great burden of suffering, as well as other adverse conditions, it is rare to find a woman who is not greatly disappointed if she does not, some time in her life, wear the crown of motherhood.

An eminent lady teacher, in talking to her pupils, once said: "The greatest calamity that can befall a woman is never to have a child. The next greatest calamity is to have one only." From my professional experience I am happy to testify that more women seek to overcome causes of sterility than to obtain knowledge of limiting the size of the family, or means to destroy the embryo. Also, if consultation for the latter purpose is sought, it usually is at the instigation of the husband.

Believing in the rights of unborn children, and in the maternal instinct, I am consequently convinced that no knowledge should be withheld that will secure proper conditions for the best parenthood.

Many of our advanced physiologists and philanthropists teach that the law of continence should be the law to govern married people in the sexual relation. (See page 157.) However, if a woman is not convinced of the truth of this theory, or is practically unable to accord her life to it, we would suggest to her the study of the physiological laws of ovulation.

Conception can take place any time after ovulation until the ovum passes from the uterus. The time of viability is from two to fourteen days. The balance of the month conception cannot ordinarily take place.

Sterile women desiring offspring should seek sexual union soon after the appearance of the menses. Those not desiring offspring should avoid copulation until the ovum has passed the generative tract.

Married people, in normal health, temperate in the sexual relation, desirous of controlling the size of their family, can usually depend upon this law.

Can conception possibly take place after sufficient time has elapsed for the ovum to have left the uterus? Dr. Cowan says: "Sexual excitement hastens the premature ripening and meeting of the germ-cell with the sperm-cell, and impregnation may result, although intercourse occurs only in the specified two weeks' absence of the egg from the uterus."

Possibly this may be the case under some circumstances, such as diseased conditions, or after long separation of husband and wife. It is, however, of rare occurrence, where one's life is governed by moderation, and the act is mutual.

Many of the means used to prevent conception are injurious, and often lay the foundation for a train of physical ailments. Probably no one means is more serious in its results than the practice of withdrawal, or the discharge of the semen externally to the vagina.

The act is incomplete and unnatural, and is followed by results similar to and as disastrous as those consequent upon masturbation. In the male it may result in impotence, in the female in sterility. In both sexes many nervous symptoms are produced, such as headache, defective vision, dyspepsia, insomnia, loss of memory, etc. Very many cases of uterine diseases can be attributed solely to this practice.

The objection to the use of the syringe is that if the sperm has passed into the uterus the fluid cannot reach it. A cold fluid in some instances may produce contractions to throw it off, but cannot be relied upon. Drugs that are used to destroy the germ are usually injurious, and cannot accomplish the purpose beyond the vagina.

Some of the appliances sold for this purpose are a sure prevention by mechanical interference. If the material is pliable, the only positive injury is from preventing complete interchange of magnetism, and the harm may be considered more a negative than a positive one.

A theory is advanced that conception is under the control of the woman's will; that by avoiding the last thrill of passion herself, during coition, she can prevent the ovules being displaced to meet the male germs. This is, however, inconsistent with the teaching that ovulation is coincident with menstruation.

By some also a theory called sedular absorption is advanced. In this, intercourse is had without culmination. No discharge is allowed. People practicing this method claim the highest possible enjoyment, no loss of vitality, and perfect control of the fecundating power.

When men and women learn that the procreative function is the highest function of their nature, and consequently that passion instead of dominating their lives should be under the reign of reason, then may we hope for a wiser, happier and purer race of beings. Wiser parenthood and intelligent generation is the surest regeneration.

In answer to inquiries for knowledge upon pre-

natal culture, we refer to A. E. Newton's estimable work upon this subject. At first we were jealous that such a needed work was not written by a woman, but we have become thankful that that man lives whose heart is in sympathy with the needs of the race, and was inspired to give us such words of wisdom. He teaches us that we may take the crude metal, fashion and burnish it into a thing of beauty.

He directs the attention especially to the truth that the father's responsibility to the child is equal to the mother's. That his life must be pure, his appetites subservient, and his soul filled with high aspirations. To attain to such a life he must avoid stimulating food and drink, as well as tobacco.

Few realize the ill effects of the latter, especially upon the pregnant woman, the fetus and the infant. In the mother the sick headaches, nausea, and many nervous ailments of pregnancy are directly attributable to the effect of tobacco smoke which she must inhale.

The child *in utero* and in the cradle, is also poisoned by it. Chorea, paralysis, heart disease, convulsions, and many other maladies are the result of the father's tobacco habit.

TESTIMONIALS.

Many testimonials have been received from people who have derived benefit from following the teachings of *Tokology*. By permission a few extracts are taken from letters which are only similar to many received, giving wonderful proof of the efficacy of its teachings. In some families the work is used as a reference book, while others loan it to friends and

neighbors, keeping it on its mission of health and happiness. Frequently the writer says: "I would not take $10 for my copy if I could not procure another."

One writes: "It has been such a comfort to prepare dainty and palatable dishes for an invalid mother from the recipes in dietetics. It is a great gratification to her that she can have even pies and puddings that can do her no possible harm."

Mrs. W., of Forest City, says: "I have depended on *Tokology* for knowledge in bringing up my twin babies. Have taken them through attacks of croup and summer complaint, and have never called a doctor."

Mr. J. C. A., of Henderson, Ky., says: "I have been afflicted twenty-five years with constipation, and rejoice to say I am entirely relieved by following the diet and exercises recommended in *Tokology*. I wish every one knew the value of these simple measures."

Mrs. E. J. McElwain, of Michigan, says: "A friend of mine, advanced to the seventh month of pregnancy, bought *Tokology*. She lived entirely by the instructions contained therein. Last Monday was confined. The child was born before the doctor or any one could get there. She is a true woman, and desires every woman to have the benefit of her experience." This is only one of many similar testimonials.

Dr. E. M. Hale, of Chicago, says: "I consider *Tokology the very best book* that can be put into the hands of a girl or young wife."

MY DEAR DR. STOCKHAM :—I have had three children, and in the delivery of each have suffered comparatively no pain. With the two first the physician was not in the house ten minutes before the birth of the child, while the last was born half an hour before his arrival, although he made all possible haste. I had never heard anything in regard to painless child-birth. I never was strong, and being over thirty before my first child was born, it was a mystery to myself and friends why I should have such easy labors. Several months ago I read *Tokology*, and then I understood it, for accidentally I have lived according to its teachings. My diet was entirely of fruits and grains. Meats I had a positive dislike for, and never ate them. Lemons I craved, and would eat three or four a day, also all kinds of fruits. Pastries I cared nothing for, living on rice, oatmeal, etc., and the result was, as you teach, a painless child-birth. One of my friends, Mrs. M. H., of Springfield, Ohio, in her first confinement, which was severe and prolonged, came near losing her life, with that of her babe. The cervix and perineum were lacerated, and her confinement was followed by inflammation and prolonged prostration. Her physician said she probably could not again become pregnant; if she did she would surely die. This was five years ago. Last spring she again conceived, and was very despondent, fearing the worst. When I heard of it I sent her *Tokology*. Hopefully she began following its teachings. She was amply repaid by being safely delivered, comparatively without pain, and having no subsequent illness, in her own language, "feeling so well, it seemed an absurdity to remain in bed." I have

known several others who have followed *Tokology*, and in each case it has proved equally successful. How I wish that every pregnant woman could have this grand work. I know then that the agony so many women endure would be prevented.

MRS. S. A. GOFF,
Lincoln, Kan.

DEAR DOCTOR:—I am astonished at the benefits derived from *Tokology*. I had the book only a few weeks before confinement; when I procured it my feet were so bloated I could scarcely walk across the room. I followed the advice in the book faithfully, and in a short time got so smart I could do my work with ease. The night before confinement I walked two miles and came home, feeling well. I got up in the morning and gathered up my clothes for washing, but soon found I had other business on hand. At 10 o'clock A. M. I had a nice little daughter; was sick only one hour, and no very hard pain. Always before, my sickness at such times had been long and severe; have lain unconscious for hours. My recovery, too, from previous labors, has been very lingering. This time in five days I was dressed and stood upon my feet; in two weeks was able to take care of my child, and do much besides. No money could buy my book from me. I most cheerfully give my experience for the benefit of others.

MRS. MAGGIE MEAD,
Friend, Neb.

TO DOCTOR STOCKHAM, whom I call my best friend:—When about three months advanced in pregnancy I bought *Tokology*. My health was very poor; I

was a constant sufferer. My children had all been weak and puny, and died when from three to six months old. With the last I lost my own health; many said I would not live to have another child. I have followed the directions of *Tokology* to the letter. From the first my health improved, and I had a comfortable confinement. The contrast to the previous labors was as day is to-night. I can truly say I owe my life to *Tokology*. Could I not get another, I would not take $100 for it. I wish every woman knew the value of the work as I do.

MRS. A. R. STEWART
St. Paul, Minn.

MY DEAR MISS STOCKHAM:—In presenting me your mother's book, you add another one to your many kind and thoughtful deeds, which will aid me wonderfully in my mission as wife and mother. *Tokology* contains a wealth of enlightenment calculated to promote all that is pure and noble. You and your mother are truly great philanthropists.

MARIE F. BORNEFELD,
Galveston, Tex.

DEAR DR. STOCKHAM:—My delivery was the shortest and easiest I ever had. The Lord was good to me in giving me what I needed. *Tokology* proved a great blessing, as my health improved all the time. I have a fine little girl who is perfectly healthy. I can, with good conscience, recommend *Tokology*. My sister officiated as midwife by the instructions in the book, though previously entirely inexperienced, and did well. How can any one help understanding your plain directions? I feel very grateful that *Tokology*

ever came into my hands. Some of the suggestions are invaluable. Bathing the babe in sweet oil worked like a charm. "Not tying the cord," of which some were fearful, worked nicely. I thank the Lord for giving you the power to write such a valuable book.

MRS. L. A. SHERMAN,
Litchfield, Ill.

MY DEAR MRS. TALBOT:—Your invaluable gift, *Tokology*, reached me Christmas morning. I was in bed, suffering intensely from uterine disease. I eagerly grasped the book and read as I never did before. Many times I have said that God had shown no consideration for *frail, delicate* women; that bearing children was a *blight* to womanhood and a *curse* to the marriage vow. Why was this? My heart has been in one life-long rebellion. I could not be resigned to the agony endured by wives and mothers. I knew there was something terribly wrong. *Tokology* has solved the problem for me. You cannot imagine how happy it has made me. Already I begin to feel the joy of returning health. I want all my friends and neighbors to have the book. My parents and sisters must read it. I can never tell what a blessing your gift has bestowed on me and *us*. I thank you a thousand times,

S. L. PIGGOTT,
Shreveport, La.

The following is a P. S. to a business letter from a lawyer:—Mrs. K. wishes me to add that she faithfully followed your instructions in regard to fruit diet and sitz-baths, and owes you very much for good results obtained. The doctor did not reach the house

until half an hour after the child was born. She really experienced but one severe pain, while our first child caused her much suffering. We are both grateful for the science you teach.

W. F. K.,
Huron, Dak.

MY DEAR DOCTOR:—In all previous confinements I had very severe after-pains; when I asked the doctor for something to give relief, he replied unfeelingly that this is nature's method of restoring the womb to its natural condition, and that our first mother had no medicine for after-pains. Thanks to *Tokology*, I had no after-pains this time. I followed the fruit and grain diet, often using three lemons a day. I always took a glass of hot lemonade before breakfast. How good of a woman to write these things as you have done for women. Yours truly,

MRS. K. J.,
Louisville, Ky.

The following is from an experienced physician:

DEAR DOCTOR:—I am glad to add my testimony to the truths of *Tokology*. I was past thirty-five when I first became pregnant, but by hygienic training before and during pregnancy, I bore three children without suffering. I ate food containing little or no bone-forming material. Every day took plenty of exercise; gardening, walking, gathering fruit, etc. I was careful that my dress caused no restriction about my waist, abdomen or hips, not wearing *even one band* to an under-garment. I took sitz-baths before retiring, and during the entire pregnancy enjoyed perfect health. Still, on account of my age I fully expected some suffering in child-birth.

On the morning of the 3d of December I noticed painless contraction of the uterus, recurring regularly every hour, the intervals gradually shortening to twenty minutes, by night. I spent the evening very pleasantly entertaining company, no one suspecting I was in labor. I went to bed and slept until 11 o'clock, when I was awakened by a positive expulsive effort; still no pain. I aroused my husband, asking him to prepare a hot sitz-bath, which was very grateful. He was anxious to call the doctor and nurse, and also to arouse my mother, who was in the house, but I assured him it was too soon. Although I had lived carefully, I fully believed I must suffer, and I begged him to disturb no one until I became *sick*.

In a few minutes I felt I must arise from the sitz-bath, and quickly knelt beside a chair. The next expulsive effort brought a welcome little stranger. I poured my heart out in gratitude for the knowledge that had brought about such wonderful results. With my own hands I tied the cord and removed the placenta. I fixed myself nicely in bed and enjoyed the washing and dressing of my own darling with true motherly delight. My own mother in an adjoining room knew nothing of the event until all was over. The second day I was out doors, and the third I took a short ride to visit a patient who needed a minor surgical operation.

When my second child was born we had just made the trip by steamer from New York to San Francisco. We had been out to an evening lecture and were guests at a Water Cure, separated from our baggage. I had slept quietly about an hour, when I became aware that I must arouse my husband to go

for one trunk with all possible speed. Although he had to go only a short distance, which he accomplished in haste, the child was born without pain while I was entirely alone. I really felt no need of assistance. With the dear boy who has blessed every hour since his advent, we continued the journey to Santa Cruz the third day of his life, with no bad results.

My third child was born with only half an hour's painless, expulsive effort, and as usual I was up and out doors the second day after.

If women could be made to understand what is gained by *absolutely* dressing the waist free from any pressure or constriction we could hopefully predict a near millennium of safety and freedom of pain in child-birth. It seems almost hopeless to convince any lady that the bands of her skirts and drawers are any detriment to her in the performance of natural functions. I have known of hundreds of cases where natural conditions have brought about results similar to my own experience. * * *

I must take from my diary one case, a strong proof of the truths taught in *Tokology*. Mrs. H., of Philadelphia, in the fifth month of pregnancy placed herself under my care. She was married at thirty-five, and soon became pregnant. At her full term surgeons discovered deformity of the pelvis, and were forced to perform craniotomy and instrument delivery. She was told she never could give birth to a living child. Twice subsequently, by eminent surgeons, abortion was produced in order to save her life. In this last pregnancy she was told that her constitution was so undermined it would be certain

death to destroy the fetus, and she had better take her chances by going full term. She came under my care with the expectation of only four months of life, very feeble, and a great sufferer. I was never more determined that any one should have the advantage of the truths of *Tokology*. I kept her out doors lying on a cot, and had her practice deep breathing and gymnastics. Three times daily she had thorough *massage*, taking cool sitz-baths frequently. She soon began to take short walks, although when she came she was unable to cross the room alone. Previous to the birth of the child she could walk with ease a mile before partaking of her breakfast of fresh fruit. Although deformed and apparently a physical wreck, by reliance upon these simple methods only, discarding all drugs, she brought forth a living child with only a few hours of suffering. She has ever since been a proud, healthy, happy mother. May God bless you, dear doctor, in your mission of good health to women. Ever faithfully,

HARRIET H. LARKINS, M. D.
Wright, Dickey Co., Dak.

A grateful woman writes:—My reason for wishing to sell *Tokology* is this: Twice I went down to death, suffering all the agony woman can suffer and live. For what? Only to receive into my aching arms a piece of lifeless clay.

The last time I was pregnant I stumbled upon *Tokology*, and followed its teachings. The result is a beautiful living daughter. These are glad tidings of great joy.

MRS. GEO. N. JARVIS,
Arapahoe, Neb.

The following letter is from a lady well known in philanthropic work. She says:—I wish to give you the praise and credit of assisting me in obtaining such an easy confinement, and such rest and good health the last three months of pregnancy. I think it was remarkable, in view of my age (forty years), and the length of time (fourteen years) since I had borne a child. I was very poorly the first three months. During my absence at Detroit, where I had been attending the W. C. T. U. Convention, one of your circulars was sent to me. At the urgent solicitation of my family, I obtained the book. I am very thankful for it. It has been of untold help to me. From the first it gave me great encouragement.

I took a bath every other night. My food consisted of graham gems, lean meats, cooked fruits and a little hot water and cream. I ate nothing from my noon dinner until morning, and slept much better at night. Women eat too much. If they would only try, they would soon get over that feeling of hunger of which they complain. One thing they should insist upon, and that is to sleep alone for at least the last three months. The last night I slept well, arose in the morning and assisted in preparing the breakfast. After the meal was over, I sent for the nurse and physician, who arrived about nine o'clock. Before eleven o'clock I had a beautiful, nine-pound baby.

I had passed through my confinement with such comfort that I could but wish that all mothers might do likewise, and that I could have read your book twenty-five years earlier. It would have saved me great suffering and trouble. MRS. M. A. LULEY,

St. Paul, Minn.

Mrs. Prof. Kinzie, of Emporia, Kansas, writes:
MRS. A. B. STOCKHAM, M. D.:

Dear Madam,—By direction of my physician, I followed the laws of health as given in your valuable book, and feel amply repaid.

Ten years ago, in my first confinement, I suffered forty-eight hours, twenty-four of hard labor, and in this second confinement not even one hour. This was no comparison to the first. My baby (now four months old) is the picture of good health, and I am myself more than ordinarily well.

My diet was of fruit and vegetables, with graham mush for breakfast. I was very regular the last three months with my sitz-baths, taking them just before retiring, and finding them very quieting.

I took a walk every day for the first seven months. After that my only exercise was my housework. I wish that this valuable book could reach all. If anything I have said will help some poor mortal, I shall be very glad to have you use my words.

Occasionally it has been reported to me that women following the teachings of *Tokology* in pregnancy have failed in securing desired results. Almost invariably in such cases investigation has proven that some of the directions have not been followed. Nearly always the *fruit diet* has been adopted quite faithfully, and sitz-baths taken as directed. Often no special change has been made in *dress*, the *exercises* have been omitted, and the teachings in Chap. XI. *entirely ignored.*

These are all equally important with diet and bathing. The millennium for women, so far as health is

concerned, would be at hand if they could be convinced of the injurious results of corsets, bands and heavy skirts. *These must be discarded.* There is no compromise if one desires the physical development so essential to healthy child-bearing.

The stock-raiser would not allow one single girth around a mare in foal that in any way restricted respiration, digestion and circulation, lest the mare or her offspring be injured. In the physical life of woman she is just as amenable to the laws of nature as is the animal.

If a man were to exchange and wear his wife's clothing for one month only he would show more interest that the mother of his child should avoid the deleterious influence of the fashionable dress. The natural and artistic lines of the body must be preserved to insure the noble attributes and capacities of motherhood.

Exercise is especially essential in pregnancy. Those recommended in *Tokology* increase the capacity of the pelvis and abdomen, develop the muscles to be used in parturition, aid digestion, and equalize circulation.

Many ladies, following faithfully the directions for exercise, have been very lax in regard to diet and baths, and yet brought about remarkable results in having an easy delivery. Several instances have come to my knowledge of ladies who, having taken elocution lessons during pregnancy, and with these lessons a thorough course of gymnastics, have brought about a natural delivery, where labor previously had been prolonged and severe. These were persons who had no knowledge of baths or *fruit diet.*

The following interesting letter is from an intelligent lady who is selling *Tokology* as missionary work.

DEAR DR. STOCKHAM:—Be sure to tell the ladies the importance of exercise during pregnancy. Many are blinded to any measure save the *fruit diet*. I had *Tokology* only the last six weeks of pregnancy. Previous to that I had exercised very little. As soon as I read the work I began the gymnastics and walking; took sitz-baths to remove any lameness caused. I also went up and down stairs a great deal, following directions in *Tokology*. To the very last week I continued canvassing for your valuable work. I had *painless* contractions of the uterus every few moments during the entire day.

After eating my supper, and refusing to play croquet, as I had an *engagement*, I hastened to my room to prepare for the arrival of the little stranger. The contractions began to cause some pain. I made use of the hot sitz-bath, and it gave wonderful relief. I remained in the bath a long time until I became so sleepy it was necessary to go to bed. I had *no hard pain*. The expulsive efforts were not as painful as the first contractions, and those I had were in the abdomen. After three bearing-down pains I laid down, and the fourth pain brought the child from the uterus into the world, and without any of that tearing pain usually experienced. All was over at 10:30 o'clock.

This was my third boy. With both of the others I was in labor all night and half of the next day, and took chloroform for hours, the *agony* was so unbearable. Each time I was so sore and weak afterward I could not move myself in bed. This time I could

move right away to any part of the bed, and the next day sat up to eat food three times. I had my nurse only four days, while each time before I could not do without her under three weeks. I was out selling *Tokology* in less than two weeks, and can assure you, dear Doctor, I never did any work with such a good will as this. It is taking a blessed truth to women. Sincerely your friend,

MRS. G. E. BROWN,
West Las Animas, Col.

It is probable, if a woman has had inflammation and ulceration of the womb a long time, that she will be unable to bring about conditions to insure a painless labor. This is true especially, if caustic treatment has been resorted to, resulting in induration. In such a case, a course of hygienic treatment during pregnancy will be valuable, but to restore the parts to their normal conditions may require years of right living.

I must again emphasize the need of continence between husband and wife during pregnancy. A lady physician in Iowa relates many interesting cases where labor was rendered almost painless, simply by the continent life. Her theory is, that the repeated contractions of the vaginal walls and vulva render them unyielding, and consequently there is absolute mechanical obstruction to the passage of the head. The theory is certainly worthy of consideration.

I have long been thoroughly convinced that sexual intercourse during pregnancy is entirely inimical to the best conditions for maternity. The natural repugnance that most women have for the act during

fetal growth, ought to cause right-minded people ser ous thought.

Col. A. B. Meacham, who has spent much tim among the Modocs, says: "There is a traditio among them that the Great Spirit blew his breat upon a maiden, and said to her that she should b come the mother of the son of the Great Spirit. H forbade her to look upon the face of man until th child was born. To this day no Indian woman the tribe who is to become a mother, ever looks upo the face of man."

Is it not possible that here is one potent reason tha Indian women have so little suffering in child-birth May not the intelligent white man learn a lesson purity, of self-abnegation, as well as of honor to h wife and offspring, from the untutored savage?

We are counseled by eminent physicians, like A ton, Gerrish, Cowan and Winslow, that the continen life gives to the individual the best physical develo ment, the greatest intellectual strength and the higl est moral excellence, as well as promotes condition for the improvement of the race.

Prof. Huxley says: "That man has had a libera education who has been so trained in youth that h body is the ready servant of his will * * * and who, no stunted ascetic, is full of life and fire, bu whose passions are trained to come to heel by a vig orous will, the servant of a tender conscience."

Dr. F. H. Gerrish says: "Man's procreative energ should be to him a sacred trust, to be kept inviolat and to be used only with the distinct and definite pu pose of perpetuating his kind. His children woul never be accidents, but begotten intentionally, at

time when both parents are in a good physical and mental condition."

Further, in opposing the prevalent opinion that continence is a cause of disease, he says: "I very much doubt if a member of this association ever had to treat a disease resulting from chaste continence. I would emphasize the adjective, for nothing but harm can come from the excitement dependent on the constant or frequent entertainment of lewd imaginings, even if one abstain altogether from sexual indulgence."

Rev. N. E. Boyd says: "Men need all their vital force not required in fatherhood, for the performance of the labors, material, mental and moral, whereunto they are called."

A well known author testifies: "Beyond doubt, as men now live, continence is almost impossible. They drug themselves with tobacco and excite themselves with wine. They enervate their powers in heated rooms, and read books which rouse lascivious desires. Naturally, sexual passion attacks them, and if it be refused gratification they become fevered and restless, and declare that health demands frequent intercourse, and suffers without it. But it is not a *physical necessity.* Under certain conditions absolute continence is consistent with the highest health during the whole lifetime. To attain this, however, one must live in perfect accordance with hygienic laws; he cannot expect to suppress one vice and yield to another."

The following wise counsels to fathers is in a pamphlet entitled "The Better Way," by A. E. Newton: "The matron, when once her organism has en-

tered upon the work of developing a new life, should be left unmolested by intrusion in that department of her being. The work cannot be well performed—it may be wofully defaced or ruined—if the energies of her system are drawn upon by additional demands upon the sexual organism. At all events, the intuition of the mother, when against the practice referred to, should never be violated. To abstain from all intrusive acts is a duty which no father can disregard with impunity.

"The strength of the sexual appetite in men is unquestionably the grand obstacle to the improvement of the race in the manner proposed. But is this strength in all cases purely natural and healthy? Otherwise, no one can rationally urge that its demands should be indulged to their full extent—much less that the personal rights, the health and happiness of the opposite sex, and the welfare of unborn generations, should be sacrificed to its indulgence. * * * Experience has proven that mastery can be attained. A determined will—an earnest, constant aspiration for power from above to overcome, with a careful abstinence from exciting foods, drinks, acts and thoughts, and the use of appropriate means to allay excitement—these, persisted in, will bring the victory in due time."

William Acton, M. R. C. S., an English physician eminent in his profession, says: "True continence is complete control over the passions, exercised by one who has felt their power, and who, were it not for his steady will, not only could but would indulge them. * * * Granted, that continence is a *trial*, a sore trial, a bitter trial, if you will, what, I would

ask, is the use or object of a trial but to try, to test, to elicit, strengthen and brace whatever of sterling, whatever of valuable, there is in the thing tried? To yield at once, is this the right way to meet a trial? To lay down one's arms at the first threatening of conflict, is this a *creditable* escape from trial, to say no more? Nay, is it *safe*, when the trial is imposed by the highest possible authority? Our object ought to be to preserve a pure and healthy mind in a pure and healthy body. Judiciously directed, training and exercise of *both* toward this definite object would, I am sure, in most cases, reduce the difficulty of living a chaste life to the minimum, and indeed render the conflict rather a proud and thankful sense of self-command than an arduous struggle. * * * The man who can command even his thoughts will have an easier task in keeping himself continent than he who cannot. He has great power who, when physical temptations assail him, can determinedly apply his mind to other subjects, and employ the whole force of his will in turning away from the danger."

Carpenter, in a late edition of his work, says to those who urge the wants of nature as an excuse for the illicit gratification of the sexual passion: "Try the effects of close mental application to some ennobling pursuit, in combination with vigorous bodily exercise, before you assert that the appetite is unrestrainable, and act upon that assertion."

To parents desiring the best interests of offspring, these quotations from men of known scientific and professional reputation are worthy of careful thought. Lives based upon these truths will make motherhood desired, and offspring a blessing.

To secure the best possible conditions for maternity, a lady should never lose sight of the value of congenial, absorbing occupation. There should be no leisure to foster morbid symptoms. Having neither financial need nor desire for following a special vocation, the systematic pursuit of some study, as geology, natural history or botany, will make conditions for satisfactory pre-natal culture.

Who knows but by throwing her whole soul into the search, and thus being carried out of herself by these ennobling pursuits, she may become the mother of a Humboldt, an Agassiz, or an Audubon?

A letter lies before me from a lady who had long been a sufferer from chronic diseases. By following the instructions of *Tokology* since her marriage, and for some months previous to pregnancy, she has overcome most of her troubles. She writes: "I have good news for you. Two months from now I expect to become a mother. The past six months life has been a constant joy. I never have had such good health, consequently such good spirits and enjoyment in my work. I am now spending four or five hours a day in study—German and music, and at his earnest request, Latin, with my husband.

"I do my own housework, and with my sewing, social demands and daily walks, am busy every moment, yet, strange to say, I never seemed to have as much leisure as now. We live simply and, I believe, sensibly, and I try to do the things that are best physically and mentally for me as a mother, and for the little one who is now part of my life." This lady finds absorbing interest in training classes of young girls for a noble womanhood and motherhood.

So many objects of philanthropic interest now appeal to every woman that there is abundant opportunity to reach out beyond self. In every direction the needs of humanity demand of all who have hitherto been idlers that they try the blessedness of unselfish endeavor. By responding bravely to these appeals in the days of prospective maternity, the mother will find both present and future reward.

In pregnancy, as in chronic diseases, symptoms are often attributed to *imagination*. It has been proven that the *imagination* or *belief* can create, not only symptoms, but actual disease. Physicians recognize this fact, but are slow to acknowledge the correlative one, that this same imagination or belief is of untold therapeutic value in medical practice.

Dr. Evans says: "As thought and existence are identical, a change of thought must necessarily modify our existence. To *think* a change in our bodily condition, and not merely to think about it, will determine all the living forces toward that result, as certainly as a stream issuing from a fountain will flow in another direction when we change the direction of its channel."

For self-healing, one can learn to abstract his thoughts from suffering or from the organ affected, so as not to sense the pain. This is somewhat different from opposing the *will* power, as is usually understood; indeed, it is rather the opposite. By an introversion of thought, a *passive* condition is secured and maintained. Evans styles this an "*impressible conscious state.*"

Understanding the conditions, this state can be attained by any one, and while in it pain and disease,

real only in thought, can be removed. In this way one *thinks* himself out of morbid conditions. One then, really is only to think the opposite of his seeming condition steadily, persistently and honestly, to effect the change.

When a student at Olivet College, Michigan, I heard Professor Hosford lecture upon "Health and Disease." He asserted that sickness could be induced by working upon the imagination or belief.

In support of this statement he related a case of a dose of flour, supposed to be ipecac, producing the ordinary results of that drug. Four of the fun-loving students determined to test this assertion. In one of their rambles they saw a teamster on his way to procure lumber at a place some miles distant. They resolved to experiment upon him. Awaiting his return, they stationed themselves at considerable distances and accosted him in a friendly manner. Each of them, however, added to his cordial greeting words of dismay at seeing him look so ill.

To the first he stoutly denied any indisposition, but to the second admitted slight indigestion; the third found him looking miserable and suffering from colic. He was persuaded to stop walking beside his team and ride on the lumber. The fourth easily induced him to resign the reins, while the teamster, really ill at last, rode home reclining upon his load, unable for the rest of the day to leave his home.

A curious experiment was tried by noted surgeons upon a condemned criminal. He was made to believe that he was to be bled to death. Stretched upon a table, bound and blindfolded, he awaited the operation. The surgeon with a sharp instrument

pricked his flesh to simulate the opening of an artery. At once a small fountain, from which water at blood heat flowed, was opened over the supposed incision; the water flowing freely at first, gradually became less and less copious.

The surgeons and attendants spoke among themselves of his failing powers, of his pallor, of his loss of heat and pulse-beats. They questioned him meanwhile as to these symptoms, which questioning he answered in full faith that his life-blood was indeed passing from him. He grew fainter and more faint, gasped for breath, and finally expired.

If a well person can be made to believe he is ill, yes, and really to die of his affection, as in the case above noted, and also as is often noticed in an epidemic, may not a sick person be led to believe he is well? Sometimes a *silent suggestion* of friend or physician to this end is more potent than the spoken word. In the former case the thought of the patient unconsciously seconds the thought of the friend, while in the latter, argument and discussion rouse an opposing force.

A pregnant woman, by *ignoring* her ailments, by abstracting from them her thoughts, by occupying her mind entirely, can bring about wonderful results in overcoming undesired conditions. In following the teachings of *Tokology*, care must be taken that the mind is not directed to watching for and fostering morbid symptoms.

The *mind*, the *real self*, controls all the functions pertaining to life, and its supremacy can be directed toward removing morbid tendencies. *One can train the mind to this end.* It is merely what is usually

termed "getting above one's self," or "putting sorrow, grief and pain under one's feet." It is simply the conquest of self and sin, as taught in different ways in religion and philosophy. Cheerfully, hopefully bring the soul into harmony with *the good* in the universe. Where there is light there can be no darkness, where health reigns, disease disappears.

Learn to subordinate the body. Encourage all indications of health. By a calm trust and a restful faith in the Divine, whom every human being in his real self may approach, sins of the body (disease) as well as sins of the soul may be dethroned, and health and happiness reign supreme.

For the sake of human progress, may every parent lose sight of selfish interest and strive to the utmost for all conditions that shall favor the highest good of offspring, "for to be well-born is the right of every child."

AUTHOR'S SPECIAL REQUEST.

The author earnestly solicits every lady who has followed the teachings of *Tokology* during pregnancy to communicate the result. Her name will be suppressed if desired. For the sake of all suffering women she asks a faithful report upon these points:

What has been your experience in previous labors?

How long before confinement did you have *Tokology?*

What hindrances existed to your following the directions strictly?

Did you take all the exercises recommended?

Did you climb stairs and walk daily?

Did you follow any occupation or do housework?

How near did you dress according to instructions?

Did you take the baths prescribed, and which gave the most relief for existing symptoms?

Were hot sitz-baths taken during confinement?

How faithfully was fruit diet followed?

Did you eat meat, pastry or butter?

Did you omit the products of the wheat?

How many meals a day were taken?

Did you live a continent life during the entire nine months?

Give the length and severity of labor, also condition of child at birth, and its subsequent health?

Did you have trouble with the breasts or any post partum disease?

State length of time and particulars of recovery.

Add other items of interest, also experiences of other persons coming to your knowledge.

A. B. STOCKHAM, M. D.,

Chicago, Ill.

EXPLANATION OF PLATES.

I. Bones of the pelvis, consisting of the two ossa innominata and the sacrum and coccyx. The two latter are a continuation of the vertebra. These four bones form a strong protecting wall for the pelvic viscera.

II. Uterus; ovaries in the broad ligaments; oviducts and fimbriated extremities; round ligaments; vagina laid open showing the mouth of the womb and the folds in the mucous membrane. (See page 25.)

III. Section of female pelvis. 1, rectum; 2, uterus; 5, bladder; 6, clitoris; 7, urethra; 9, anus; 10, vagina. (See page 26.)

IV. Veins supplying uterus and ovaries. 1, uterus seen from the front; the right half is covered with the peritoneum. 6, 7, utero-ovarian vessels; 8, 8, veins from the oviducts; 10, uterine veins; 11, uterine artery. (See page 26.)

V. Arterial vessels of uterus, ten days after delivery. 1, body of uterus; 2, mouth of uterus; 3, 3, round ligaments; 4, 4, oviducts; 5, right ovary; 6, 7, 8, 9, 10, 11, arteries giving off branches to the uterus. (See page 26.)

VI. Ovary and oviduct; O, ovary; Od., oviduct; Oa., fimbriated extremity of the oviduct. (See page 25.)

VII. Nerves of the uterus advanced in pregnancy.

1, sacrum; 2, rectum; 3, bladder; 4, uterus; 5, ovary; 6, extremity of oviduct; A., B., each, a plexus of nerves. (See page 26.)

VIII. Fetal surface of the placenta.

IX. Uterine surface of the placenta.

X. Fetal circulation. (See page 30.)

XI. Mammary gland; a, nipple; b, areola; c, c, lobules; 1, milk ducts; 2, extremities of milk ducts. (See page 28.)

XII. Grafian follicle, containing the ovum. 1, ovum; 2, 3, membranes of the follicle; 4, its vessels.

XIII. Human embryo at third week, showing the villi of the chorion from which the fetus receives nourishment until about the end of second month. (See page 34.)

XIV. Fetus and surroundings at seventh month. Is not always found in same position.

XV. Fetus in membranes at five months.

XVI. First head presentation.

XVII. First breech presentation.

XXI. Expanding os-uteri and protrusion of membranes, or "bag of waters" in first stage of labor.

XXIII. Twins in utero.

GLOSSARY.

Abdominal.—Belonging to the abdomen or belly.
Abnormal.—Unhealthy, unnatural.
Aconite.—Aconitum Napellus. Monk's-hood.
Accoucheur.—Surgeon in childbirth.
Adipose.—Fatty.
Alterative.—A mild cathartic.
Amaurosis.—Paralysis of optic nerve.
Amenorrhea.—Suppression of menses.
Ammonia.—Hartshorn.
Amnion.—The internal membrane containing the waters and fetus.
Amniotic.—Pertaining to the amnion.
Anemia.—An impoverished state of blood. Bloodless.
Anteversion—Bending forward.
Antiperiodic.—A remedy for intermittent affections.
Antiphlogistic.—Counteracting inflammation.
Antiseptic.—Prevents or retards putrefaction.
Anus.—Circular opening or outlet of the bowels.
Aperient.—Laxative, mild cathartic.
Aphrodisiac.—To excite sexual desire, or to increase the generative power.
Aphtha.—Thrush. Infants' sore mouth.
Apis Mellifica.—Honey bee.
Arnica Montana.—Leopard's bane.
Arsenicum Album.—White arsenic.
Auscultation.—Act of listening to sounds in any part of the body.
Axilla.—Arm pit.
Bacteria.—Infusoria. Microscopical insects.
Belladonna.—Deadly nightshade.
Benzoin.—Balsamic resin from styrax benzoin.
Bronchorrhea.—Increased discharge of mucus from the bronchia
Bryonia Alba.—White bryony.
Calcarea Carbonica.—Carbonate of lime.
Calenduline—Mixture of calendula and cosmoline.

Cantharis.—Spanish fly.

Capillaries.—Hair-like vessels for conveying the blood from the arteries to the veins.

Cardiac.—Belonging to the heart.

Catarrh.—A discharge from mucuous surfaces of the body.

Cathartic.—A drug that increases the action of the bowels.

Caul.—The membranes which, not being ruptured, cover the child's head and face at birth.

Cellular.—Composed of cells.

Cellulitis.—Inflammation of the cellular tissues.

Cervix.—Neck.

Cervix Uteri.—Neck of the womb.

Chamomilla Matricaria.—Wild matricary. Chamomile.

Chorion.—The most external membrane enveloping the fetus.

Cimicifuga Racemosa.—Macrotis. Black cohosh. Black snake root.

Climacteric.—A critical period.

Coccyx.—Terminal bone of the spine.

Cohosh.—Black snake root. Squaw root.

Colocynthis.—Bitter cucumber.

Congestion.—Over-fullness of bloodvessels.

Contusion.—A bruise.

Crural.—Belonging to the leg.

Cystitis.—Inflammation of the bladder.

Defecation.—The act of voiding excrement or feces.

Depurition.—Removal of impurities.

Diagnosis.—Scientific determination of diseases.

Diaphragm.—Breathing muscle between chest and abdomen.

Diaphoretic.—A remedy that produces perspiration.

Diluent.—A substance that dilutes or thins liquid.

Diphtheria.—A malignant membranous disease of the throat.

Diphtheritic.—Pertaining to diphtheria.

Diuretic.—Causing increased discharge of urine.

Dystocia.—Difficult and surgical delivery.

Eclat.—Brilliant reputation, distinction, prestige.

Emmenagogue.—Remedy that promotes the menstrual discharge.

Enciente.—Pregnant.

Enema.—Injection.

Enteritis.—Inflammation of the intestines.

Ergot.—Smut of rye. A poisonous fungus growth.

Etiology.—The science of the causes of disease.

Eustachian valve.—A valve of the heart.

Excoriation.—A chafing or abrasion of the skin.
Exosmosis.—Passage of liquids through membranes outward.
Fallopian Tubes—Tubes from ovaries to uterus. Oviducts.
Fauces.—The upper part of the throat.
Feces.—Discharge from the bowels. Excrement.
Fecundation.—The act of impregnation. Fertilization.
Fetal.—Pertaining to fetus or child in the womb.
Fetus.—Child in the womb after the fifth month.
Fimbriated.—Fringed, finger-like.
Flatulence.—Gases in the stomach or bowels.
Flex.—Bend.
Fomentation.—Warm or hot application to the body.
Foramen Ovale—Opening between the auricles of fetal heart.
Function.—The office or duty of any organ.
Fundus.—Body.
Gangrene.—The first stage of mortification.
Gastritis.—Inflammation of the stomach.
Gelsemium Sempervirens.—Yellow jessamine.
Gestation.—Period of growth of child in the womb.
Gravid.—From gravis, heavy. A term applied to the uterus during gestation.
Gustatory.—Pertaining to taste.
Gynecologist.—One who makes a specialty of gynecology.
Gynecology.—The science which treats of female organs.
Hamamelis Virginica.—Witch hazel.
Hemorrhoids.—Piles. Tumors in and about the anus.
Hydrastis.—Golden seal, yellow root.
Hygiene.—The art of preserving health.
Hyperemia.—Excess of blood in any part.
Ignatia Amara.—St. Ignatius' bean.
Impotence.—Incapable of procreating.
Infusoria.—Microscopical insects.
Insomnia.—Sleeplessness.
Integument.—Skin.
Intra-uterine.—Within the uterus.
Introversion.—Turned within.
Ipecacuanha.—Ipecac.
Laxative.—Remedy increasing action of the bowels.
Liquor Amnii.—Secretion in which the fetus floats.
Lobelia Inflata.—Indian tobacco.
Malaise.—Discomfort. Indisposition.

Mammary.—Pertaining to the breast.

Massage.—Manipulation of surface and muscles for remedial purposes.

Maturation.—The formation of pus. The act of maturing.

Meconium.—First feces of infant.

Menopause.—Change of life.

Menorrhagia.—Profuse menstruation.

Menstruation.—Monthly discharge of blood from the uterus.

Mercurius Corrosivus.—Corrosive sublimate.

Mercurius Solubilis.—Black oxide of mercury.

Metritis.—Inflammation of the womb.

Metrorrhagia.—Hemorrhage of the womb.

Miscible.—Capable of being mixed.

Multipara.—Having had several children.

Nux Vomica.—Strychnos. Vomit nut.

Obstetrics.—Tokology. Midwifery.

Os.—Mouth. Used as mouth of womb.

Osmosis.—Transudation of fluids through membrane.

Osseous.—Bony.

Ova.—Plural of egg.

Ovary.—Almond-shaped body in which the ova are developed.

Oviducts.—Tubes which convey the ova from ovaries to uterus.

Ovum.—An egg.

Oxygenation.—The process of combining with oxygen.

Parietes.—Walls of a cavity.

Parturition.—Childbirth.

Pathological.—Morbid, diseased.

Perineum.—The floor of the pelvis, or space between and including the anus and vulva.

Peristaltic.—The peculiar worm-like movement of the intestines.

Peritoneum.—A membrane lining the walls and organs of the abdomen.

Peritonitis.—Inflammation of lining membrane of bowels.

Pelvic.—Pertaining to lower part of abdomen or pelvis.

Phytolacca.—Pokeroot.

Placebo.—A remedy to gratify the patient.

Placenta.—The after-birth.

Placenta previa.—Placenta presenting before child-birth.

Plethoric.—Full habit. Fleshy.

Podophyllum.—Mandrake. May apple.

Portal circulation.—Venous circulation of blood from the digestiv organs to the liver.

Post partum.—Subsequent to child-birth.

Primapara.—Woman who has brought forth her first child.

Prognosis.—Prediction of the termination of a disease.

Prolapsus.—Falling. Protrusion.

Prolapsus ani.—Protrusion of the rectum.

Prolapsus uteri.—Falling of the womb.

Prolification.—Generation of offspring.

Pubes.—External part of the organs of generation covered with hai

Pubic.—Pertaining to the pubes.

Puerperal.—Belonging to or consequent upon child-birth.

Pulsatilla Nigricans.—Wind flower.

Pyemia.—Poisoned by absorption of pus.

Radial.—Belonging to the radius, one of the bones of the fore-arm

Rectum.—Lower portion of intestines.

Rigor.—Chilliness. Convulsive shuddering.

Retroverted.—Bent backward.

Sacral.—Pertaining to the sacrum, the large triangular bone nea the end of the spinal column.

Sanative.—Health producing.

Sanguineous.—Bloody.

Sanguinaria.—Blood root.

Sanious.—Secretion tinged with blood.

Saline.—Consisting of salt.

Sebaceous.—Secreting fatty matter.

Sedative—Quieting. Soothing.

Semen.—Secretion of the testes.

Septic.—A substance that promotes putrefaction. Putrid.

Septum.—Partition.

Septicemia.—Poisoning by putrid substances.

Serous membrane.—The lining of cavities which have no externa opening.

Siesta.—A midday nap.

Silicea.—Pure flint.

Sphincter muscle.—Circular, contracting muscle.

Sperm.—Seed. Fecundating principle.

Sputa.—Matter coughed up from throat and lungs. Phlegm.

Sterility.—Barrenness.

Stertorious.—Stertorous. Deep. Labored. Snoring.

Stroma.—Connective tissue.

Strumous.—Scrofulous.

Styptic.—An astringent. A substance that arrests hemorrhage.

Tampon.—A plug to arrest hemorrhage.

Term.—Full time of gestation.

Testes.—Glands which secrete the semen.

Therapia.—Therapeutics. Remedies.

Therapeutic.—The treatment of disease. Curative.

Tissue.—The peculiar structure of a part.

Tokology.—Science of midwifery. From Greek *Tokos*, child-birth, *Logos*, discourse.

Toxocological.—Pertaining to poisons.

Transudation.—The oozing of blood through a membrane.

Tympanitic.—Distension of abdomen. Drum like.

Umbilicus.—The navel. The place in the abdomen from which the cord is removed.

Urachus.—A ligament that sustains the bladder.

Urinary.—Pertaining to the urine.

Uterus.—Womb. The organ in which the fetus is developed.

Vagina.—Passage leading from the womb.

Varicose veins.—Veins permanently dilated, with accumulation of dark colored blood.

Vascular.—Relating to the bloodvessels.

Vena Cava.—The large vein communicating with the heart.

Veratrum Album.—White hellebore.

Vernix Caseosa.—Unctuous material found on a new-born babe.

Vesicles.—A small cavity or sac in the human body.

Villi.—Minute papillary elevations for absorption.

Viscera.—Organs within the cavities of the body.

Vulva.—Outer lips of the vagina.

Zymotic.—Caused by fermentation. A zymotic disease is one caused by bacteria, or some morbific principle, acting like a ferment.

ADDENDA.

Adjuvant.—Aid.

Anodyne.—Soothing pain.

Aorta.—The great artery of the heart.

Astringent.—Binding, contracting.

Auricle.—One of the upper chambers of the heart.

Clavicle.—Collar bone.
Capsules.—Small membranous sacs.
Duodenum.—The first part of the small intestines.
Emulsify.—Soften, make milky.
Epidermis.—Outer skin.
Excretion.—Anything thrown off from the system.
Excretory.—Throwing off matter.
Friable.—Easily crumbled or broken.
Ganglia.—Nerve centers.
Ganglionic.—Pertaining to ganglia.
Glairy.—Like the white of an egg.
Impaction.—Hardened and packed closely
Induration.—Hardening.
Labia.—The lips of the vagina.
Morbific.—Causing disease.
Muco-sanguineous.—Composed of blood and mucus.
Peritoneal.—Pertaining to the peritoneum.
Pulmonary.—Pertaining to the lungs.
Purulent.—Consisting of pus.
Pruritis.—A skin trouble characterized by intense itching.
Renal.—Pertaining to the kidneys.
Retroversion.—Falling backward.
Saline.—Salty.
Salivation.—Unnatural flow of saliva.
Sciatic.—Pertaining to the hip.
Sedular.—Pertaining to seed.
Sedular absorption.—Absorption of the seed or semen.
Seton.—An opening in the flesh made and continued by drawing through a skein of silk or linen thread or horsehair.
Synchronous.—Happening at the same time.
Trachea.—Windpipe.
Testicle.—Gland that secretes the semen.
Umbilical.—Navel.
Venous.—Pertaining to the veins.
Ventricle.—One of the lower chambers of the heart.
Viable.—Capable of life.
Viability.—Capacity of living.

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Mrs. James H. Caskey: I am sure that following the directions in Tokology was all that saved my life. I did not see your book until seven weeks before my babe was born, but began at once with the sitz baths and fruit diet. I gained strength right along. The doctors said I had Pott's Disease of the Spine, and would never be able to have a child, but after following your directions I had a fine baby, with but three very hard pains. I am convinced if I had begun sooner to read Tokology I might have had a painless parturition.

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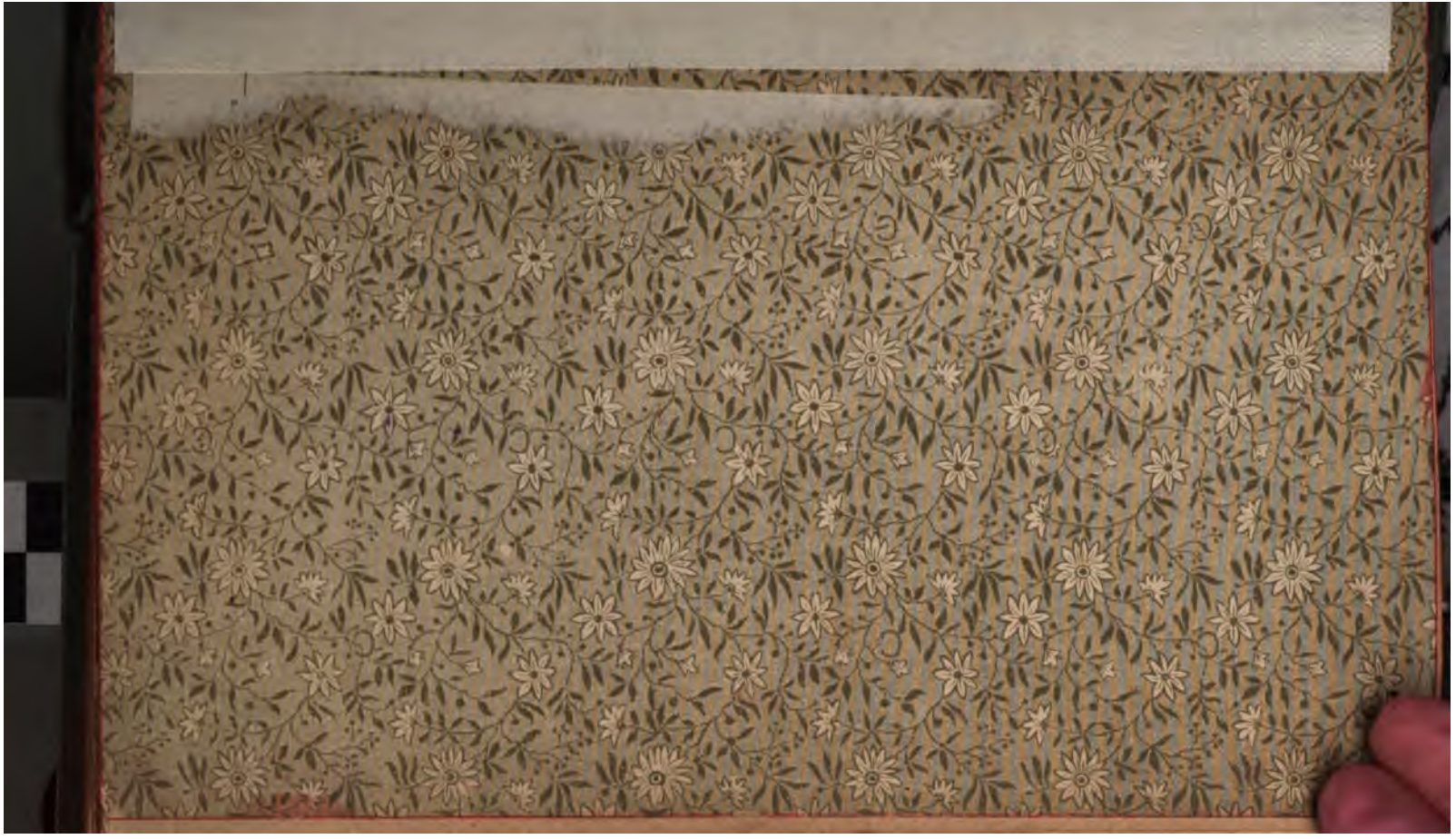

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